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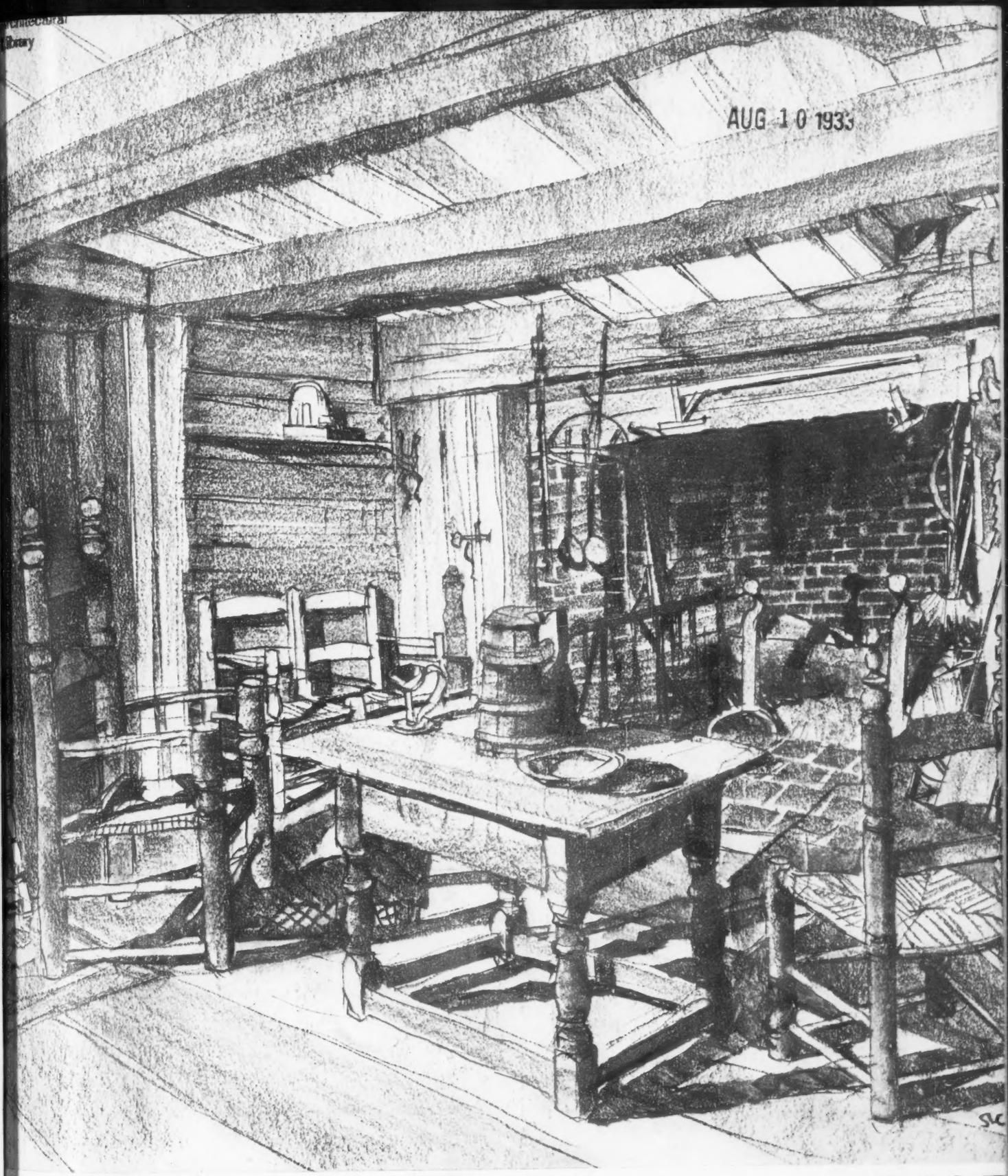

PENCIL POINTS

AUGUST
1933

AN ILLUSTRATED
JOURNAL for the
DRAFTING ROOM

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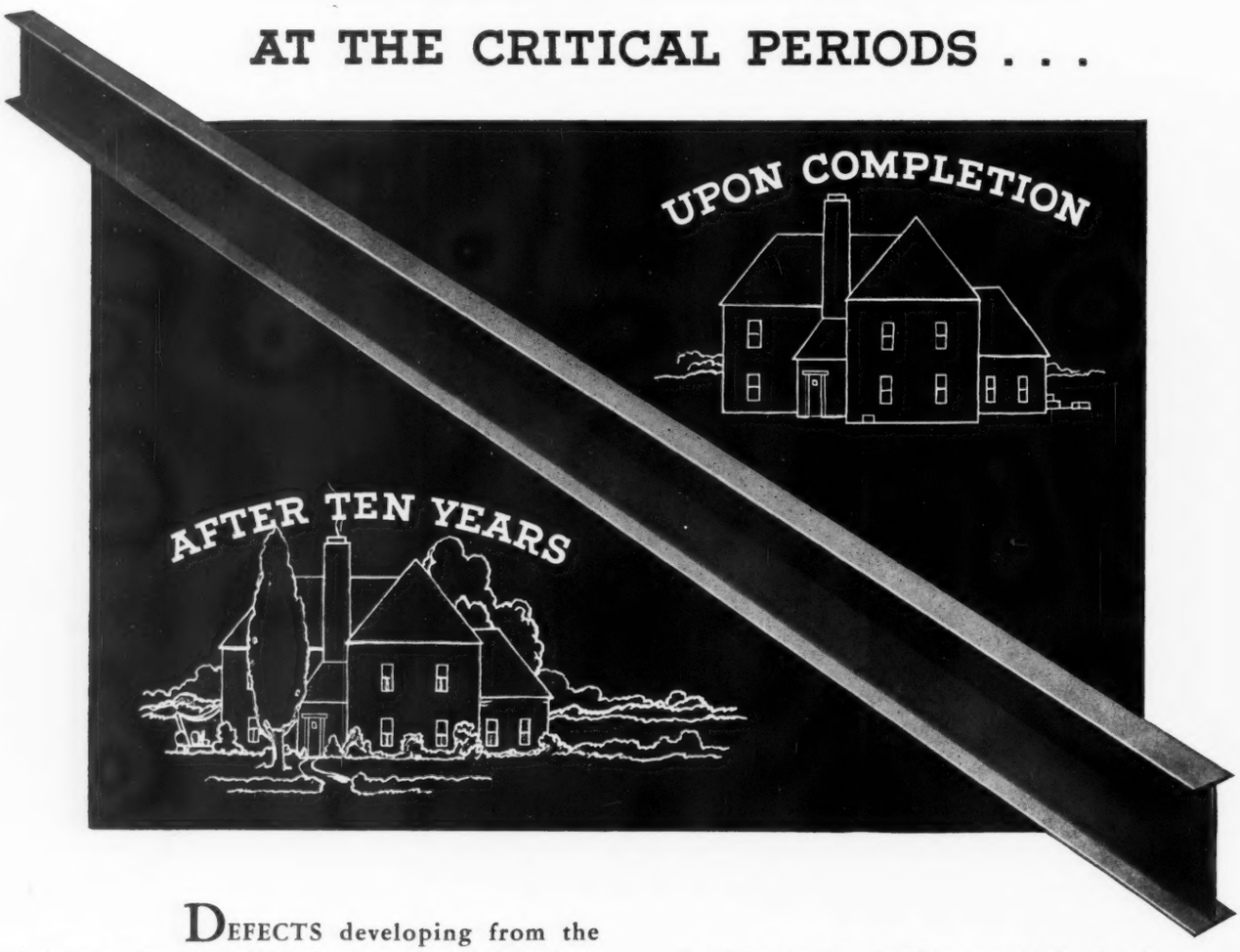
AT THE CRITICAL PERIODS . . .



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The Public Works Program Is Still Vital to Recovery

The Great Experiment is now under way. The President has called upon the nation to cooperate in the most far-reaching attempt in history to control the operation of economic laws. He has set loose all the forces of public opinion upon the conduct of business and industry in an effort to bring about a wider distribution of purchasing power as the first move towards raising the level of prosperity. In working toward this objective he will have the support of every American citizen—even of those who are skeptical as to the success of the movement. We may not have faith in the soundness of this particular campaign but we must have faith in the national "will to win." If, by any chance, the scheme should not work out, we will try another. "Bold, persistent experimentation" is what we were promised and that path is bound to lead somewhere eventually.

The raising of wages and shortening of hours without corresponding price increases means, inevitably, a shaving of profits. Labor is to get a greater and capital a smaller share of the production of wealth than has been the rule in the past. If it can be done on a sufficiently large scale to reabsorb the bulk of the unemployed into industry, a degree of mass purchasing power will be restored to the people that will enable production to be speeded up to a more efficient level of operation. Smaller profits per unit of production may well result in an actual increase in total profits. Such is the theory. We hope it will work out so that every one will be happy.

We still believe, however, that the great public works program is an equally vital part of the whole plan of recovery. There have recently been indications that there is a disposition on the part of some individuals high in the administration to hold back and go slowly in spending the three and a third billion dollars authorized by Congress for this purpose. We believe, for two principal reasons, that this money should be allotted to worthy projects, "needful and in the public interest," just as rapidly as is humanly possible. One reason for this is to reemploy the thousands and thousands of construction industry workers who form an important part of the total army of unemployed. The other is that the process of doing so is a most effective way of bringing about the more widespread distribution of wealth now generally admitted to be necessary to a healthy and permanent recovery. What the government pays out now for public works construction should be paid off over a period of years by taxation on the high bracket incomes and inheritances, which would act as a curb on overinvestment in already fully equipped industries.

We urge every architect to keep working for the Public Works Program, not alone for the sake of a possible direct government commission but for the benefit that is bound to come as a secondary effect with the stimulation of private building, particularly home building, through increased general spending power. Housing and Slum Clearance projects are perhaps the first things for the architect's attention but there are many other types of needed community buildings that should be brought to the attention of the Public Works Administration in as large an aggregate volume as can be discovered. Hospitals, schools, museums, libraries, playgrounds, gymnasiums, swimming pools, penal and corrective institutions—surely there is need for many of these and others in this broad land. It is to the trained architects that the administration should logically look for news of such opportunities for raising the cultural level of our people. Let it not be said in after years that at this time of need architects were lacking in imagination and initiative. Rather let the profession take the lead in directing our course again upward towards an enlightened culture and a prosperous nation.

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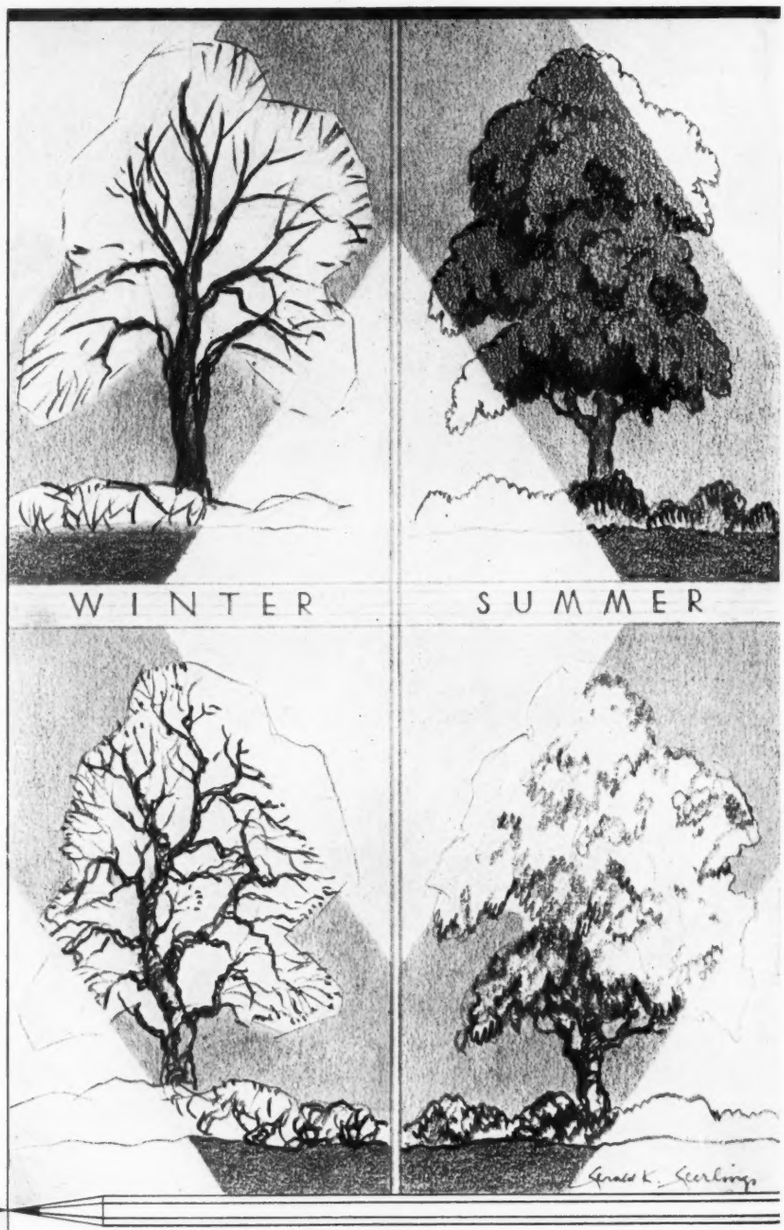
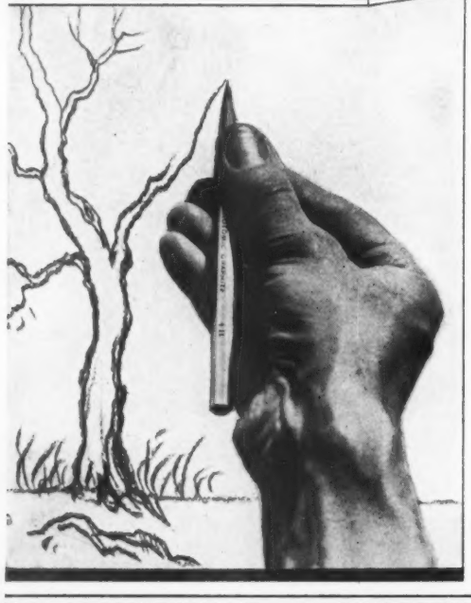
TREES — DRAW THEM FROM NATURE AND FROM THE GROUND UP

JUST FOR FUN complete this drawing with a 5B or 6B Microtomic Van Dyke drawing pencil. When you do, the diamond of the Van Dyke trade mark in the overall pattern will disappear, but the distinctive qualities of the pencil will be fixed in your mind.

The original was drawn by Gerald K. Geerlings, exactly this size on Bristol board, entirely with a 5B Microtomic Van Dyke pencil. From beginning to end the point needed no re-sharpening. Inferior makes of pencils would have required several degrees to produce this full range of tones, with an obvious lack of unity in the final result. There are, however, 18 degrees of the Microtomic Van Dyke from which to choose, suited to every variety of job. But it is unnecessary to clutter your board with half a dozen pencils, just because you want six tones between light grey and jet black.

FREE SAMPLES of any two degrees of the Microtomic Van Dyke Pencil are yours for the asking. Write to Eberhard Faber Pencil Co., Dept. PP 8-33, 37 Greenpoint Avenue, Brooklyn, N. Y.





UP A TREE WITH A PENCIL

"While humanity has long recognized that trees grow from the bottom up, most artists draw them from the top down. Hold the pencil as shown left, and you will be delighted to see how lines that start wide and black for the trunk, can feather off into twigs. Be sure to draw from nature rather than to copy a cut-and-dried formula. In studying trees note their simple outline as seen from a distance, and observe that one species differs from another chiefly according to branch structure. The sketches above illustrate only a few of many interpretations possible."

—Gerald K. Geerlings.

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Vol. XIV — *Something for Everyone in the Architectural Profession* — No. 8

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Witch House, Pigeon Cove
by Samuel Chamberlain

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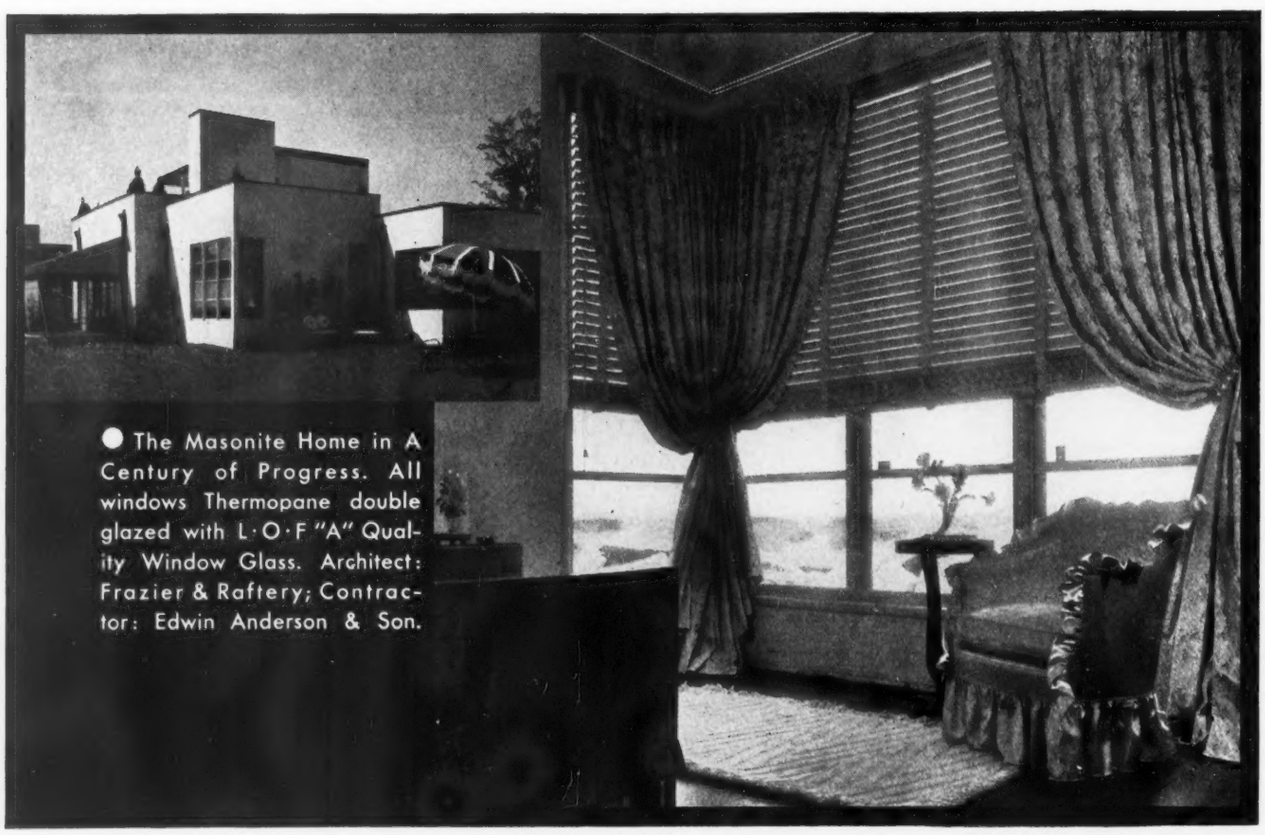
Pencil Points is indexed regularly in The Art Index.

Interest centers about a new architectural trend . . . and this new trend emphasizes glass. That is why the quality of glass has assumed a new importance. It must be the flattest, brightest, clearest and most evenly reflecting glass obtainable. Perhaps that explains why the majority of the buildings in the Home Planning Section at A Century of Progress are glazed with L·O·F Polished Plate Glass, and Improved Quality Window Glass. A closed specification for L·O·F Quality Glass will insure your client's complete satisfaction.

THE WORLD'S FAIR



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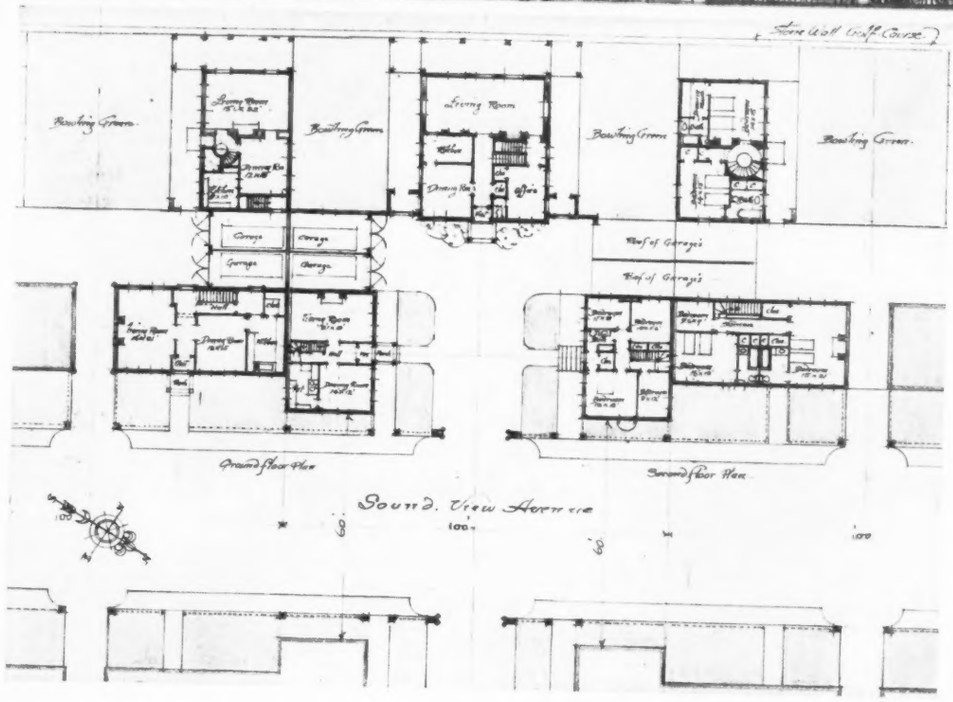


PROPOSED SMALL HOUSE
DEVELOPMENT IN
WESTCHESTER COUNTY,
NEW YORK
GEORGE T. GOULSTONE,
ARCHITECT AND DELINEATOR

The color reproduction shown on this plate is only slightly reduced from the original. The portion shown was 11" wide and has been reduced to 9". The drawing is typical of the small scale studies made by the office of Charles A. Platt and is admirable for the quality of truth to the completed architecture. The importance of adequate small scale studies is stressed in an article by Lorimer Rich appearing in this issue and illustrated by similar studies from Mr. Platt's office. The drawing was made at a scale of 20 feet to the inch and inked in with dilute India ink. The bulk of the color was applied with colored pencils, but water color was used for the windows in order that the muntins could be drawn in with white ink applied with a ruling pen. It was done on tracing paper.

PENCIL POINTS
Volume XIV August, 1933 Number 8

The Small Scale Study as a Preventive of "Paper Architecture"

With Drawings by G. T. Goulstone of Charles A. Platt's Office

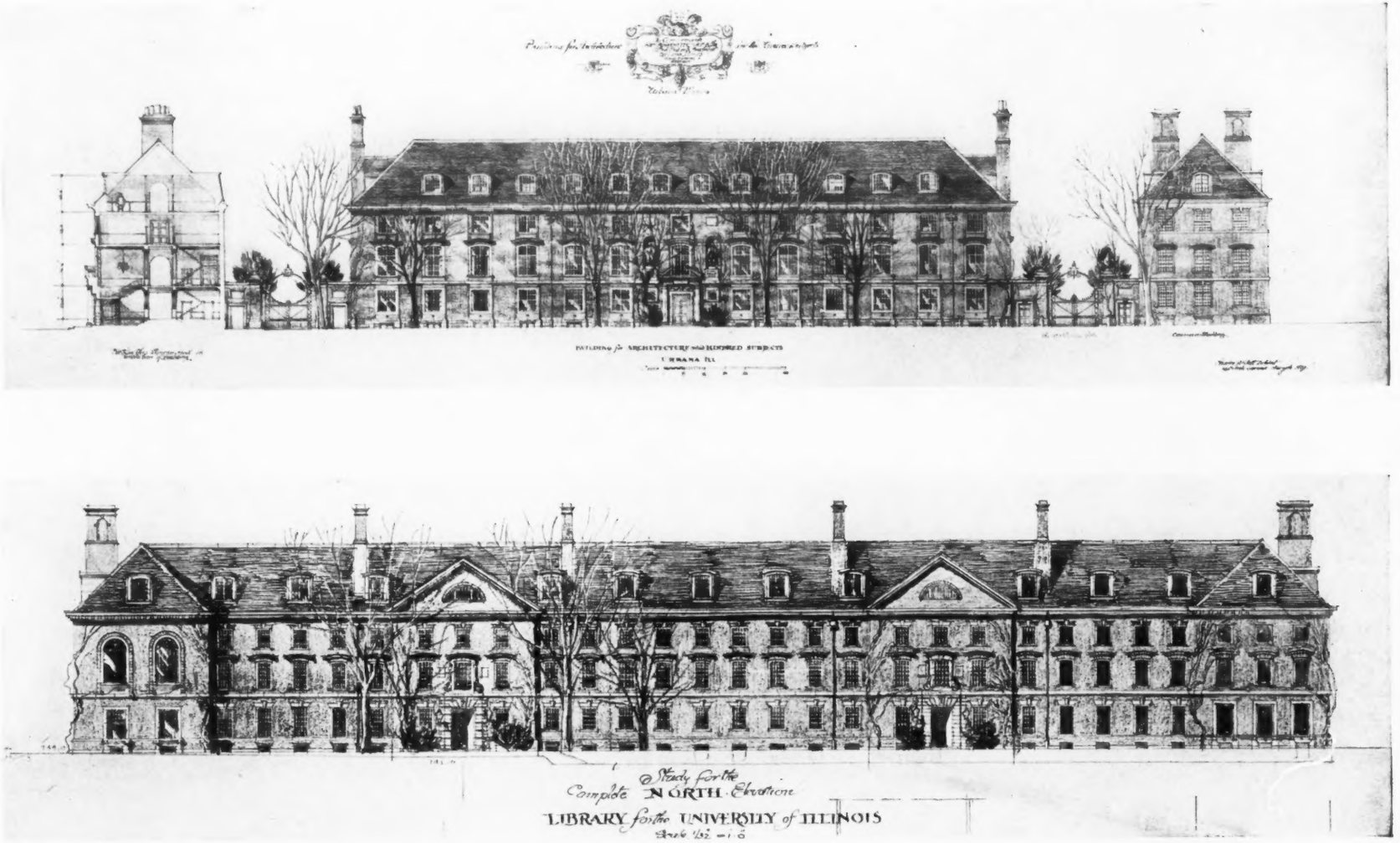
By Lorimer Rich

One of the most difficult things for an architect to determine is how his building is going to look when it is built. In his search for the proper elevation treatment of a given problem he must continually rely upon some method of predicting the finished building. To a very great extent the success of his elevation will depend upon his ability in the drafting room to express truthfully his idea. There are a certain few architectural offices that have developed this ability to a marked degree. Such an organization is the office of Charles A. Platt.

Some years ago, upon entering this office, I was immediately impressed by the quality of the preliminary studies made here—extremely successful efforts to inquire honestly, with the aid of pencil and paper, as to just what the appearance of each building would be when completed. I had nowhere seen sketches which so carefully disclosed to the designer what he might expect if the sketch were translated into brick and stone. Regardless of whether one's individual preference is toward the more conservative or the more radical progress of architectural design, the method of study here illustrated should be of benefit. The success of Mr. Platt's work does, I am sure, warrant an examination of his method, and the draftsman will gain from a study of these illustrations.

We hear much talk of "paper architecture" and we hear it said continually that this or that architect does a clever sketch, but somehow his building never quite arrives. We all know of excellent draftsmen and drawings which represent the last word in drafting skill—carefully manipulated shades, shadows, and accents—windows not darkened in and left to look like panels, etc. The man who makes such drawings seems to concentrate his effort upon the drawing as the final end and to consider, perhaps unconsciously, that his design exists ultimately on paper alone. He is a draftsman only. The real architect uses his drawing merely as a truthful means of study, and his great effort is fixed upon the building itself. Just as the palette of the painter is paint and that of the sculptor marble and bronze; so is the palette of the architect

SMALL SCALE ELEVATION STUDY FOR A RESIDENCE—CHARLES A. PLATT, ARCHITECT



ELEVATION STUDIES FOR TWO OF THE UNIVERSITY OF ILLINOIS BUILDINGS—CHARLES A. PLATT, ARCHITECT

In studies of this kind the eye can easily encompass even an extended façade so that the relations of all elements to each other can be clearly seen and the necessary adjustments made.

SMALL SCALE STUDY FOR WOMEN'S GYMNASIUM, UNIVERSITY OF ILLINOIS—CHARLES A. PLATT, ARCHITECT

The tree shadows and the play of light across the façade have been skillfully handled to produce a close approach to the actual appearance of the completed building.

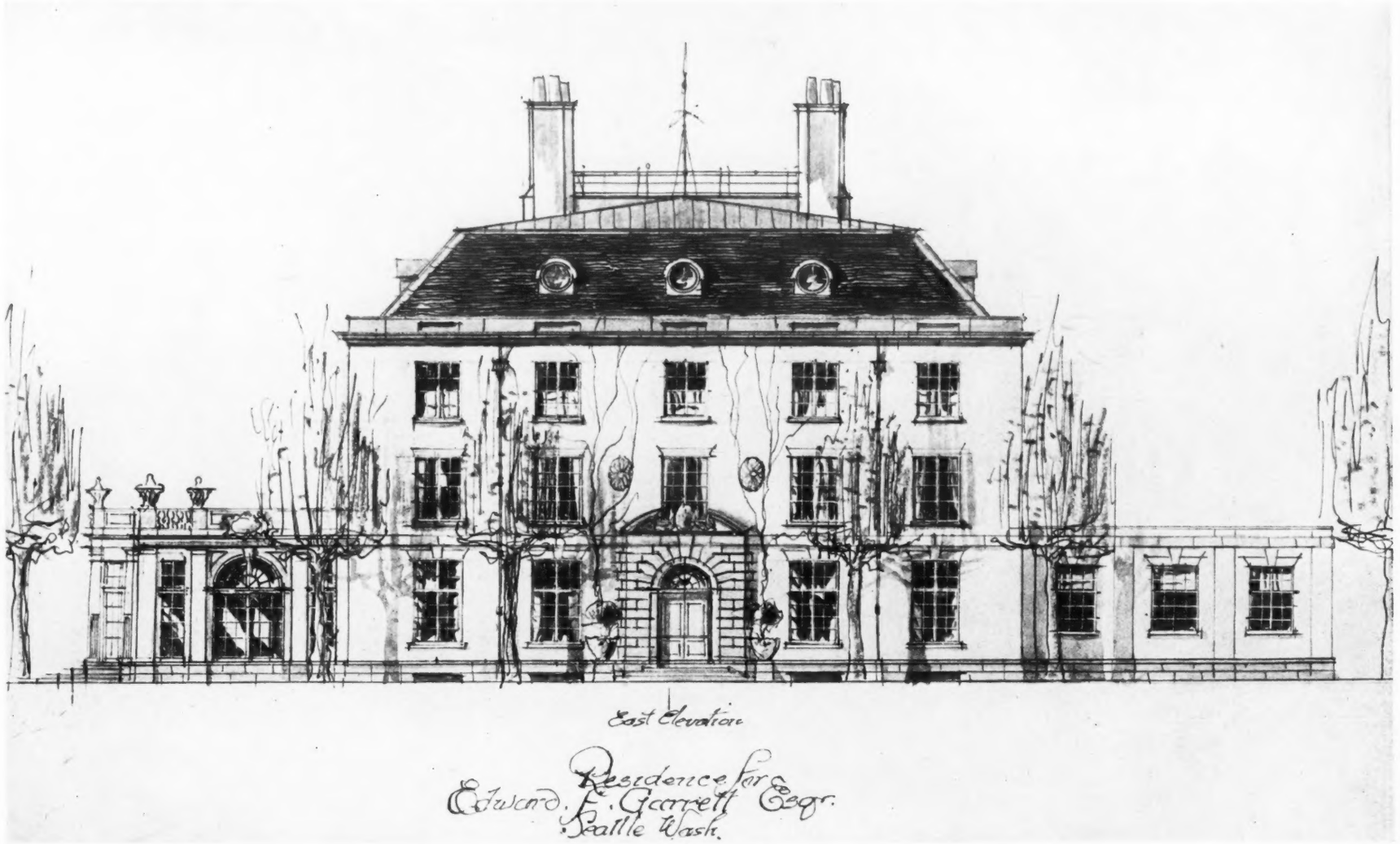
granite and stone and brick, and his work is finally expressed in these materials, not in paper. The accompanying reproductions exemplify a type of architectural study which admirably illustrates this point.

Really to design a good-looking building is a fine art and a task for an artist. One may have the most excellent graphic ability and be a veritable magician with pen and brush, but, if he has not that something which enables him to create and fashion his façade with the best taste and skill, he will never reach the heights of architectural design. This article makes no pretense of explaining how to tell whether the design is good or bad. Heaven forbid! It means to stress with the aid of these reproductions the necessity for using a technique which is truthful. In Mr. Platt's office one is continually aware that he is creating a building and not a drawing and that the studies are of service only to this end.

These drawings are all done at 1/16″ or 1/32″ scale. I think it takes a good many years to realize that studies must be made at small scale. The student, in his school project, is impatient to start his large scale drawing; the younger man in the office feels that time is lost playing around with the small scale drawing; he feels that various difficulties can be ironed out at larger scale. This is the voice of the Tempter and is plain inexperience. One arrives at this conclusion only after subjecting himself to some years of discipline and application over the drafting board and a careful comparison of the studies with the finished product—and even then he may not.

The complete length of the University of Illinois Library study is 14½ inches. The Octagon study is 11 inches long. The Deerfield Academy study is less than 9 inches long. They are drawn with diluted ink on tracing paper and then colored with washes or crayon or both. Ink rather than pencil is used because of the difficulty of controlling strong enough

SMALL SCALE STUDY FOR PROPOSED DEVELOPMENT OF THE OCTAGON HOUSE—CHARLES A. PLATT, ARCHITECT

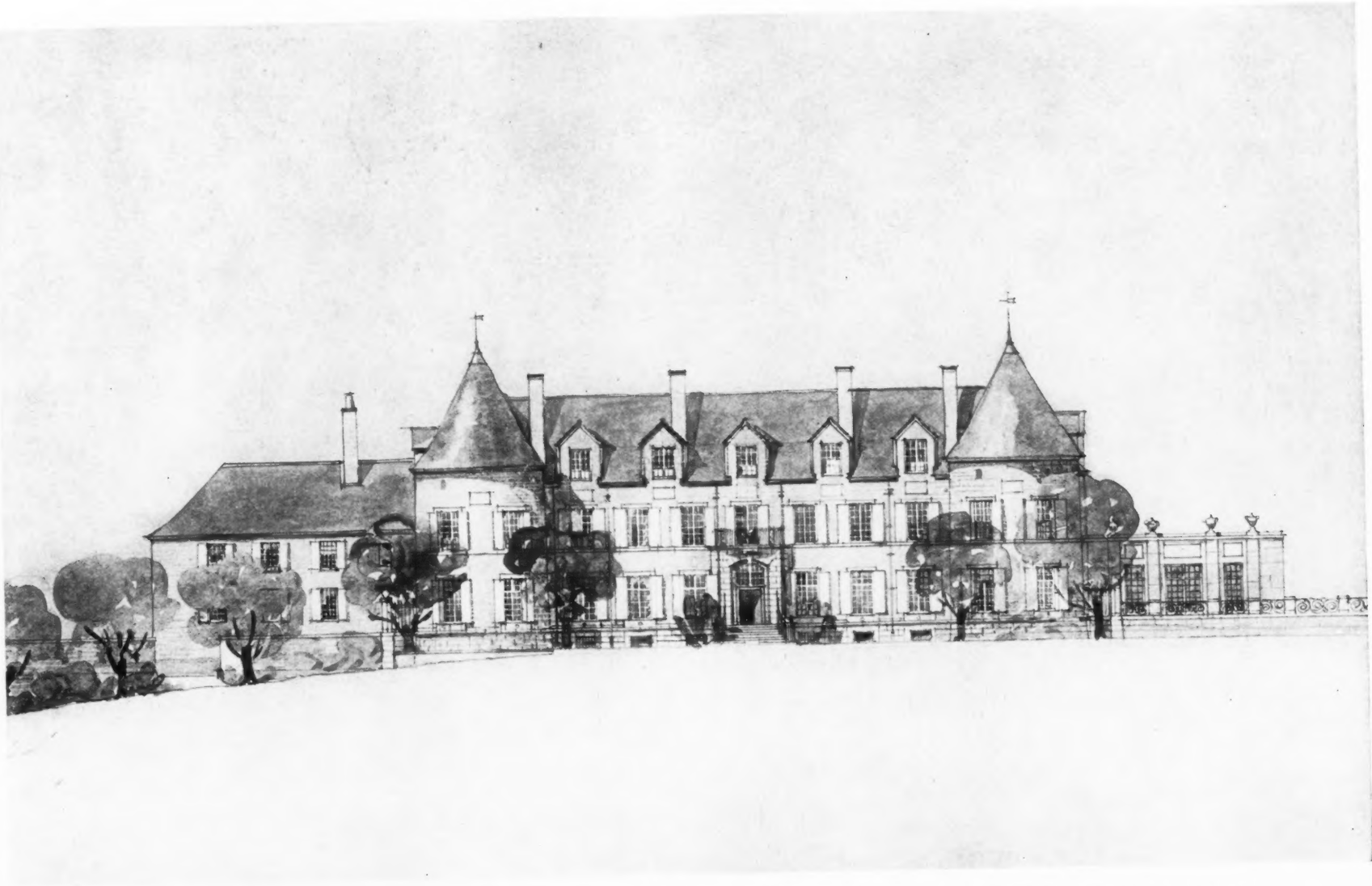


SMALL SCALE ELEVATION STUDY FOR A RESIDENCE—CHARLES A. PLATT, ARCHITECT

Reproduced at exact size of original drawing.

PRELIMINARY STUDY AT SIXTEENTH SCALE FOR DEERFIELD ACADEMY BUILDING, DEERFIELD, MASSACHUSETTS—CHARLES A. PLATT, ARCHITECT

A very lively simulation of actuality has been accomplished through an understanding of the way light and shade act on the surface of a building and of the values of materials.



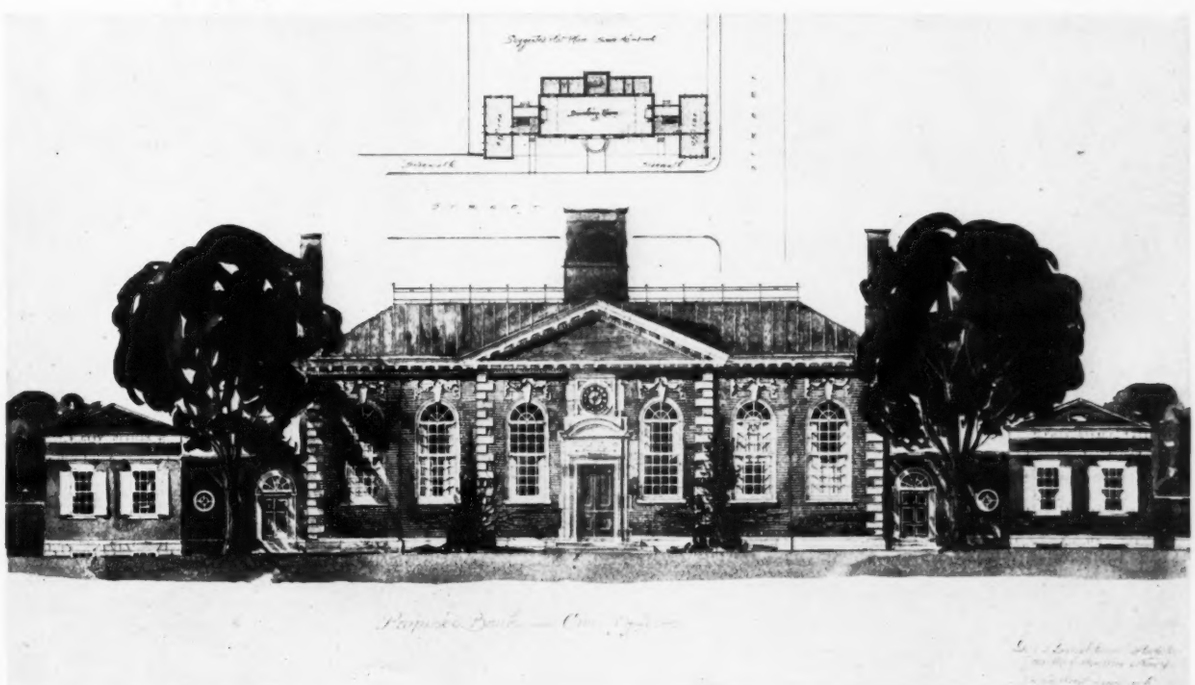
STUDY AT SMALL SCALE FOR A RESIDENCE IN THE FRENCH PROVINCIAL STYLE NEAR QUEBEC—CHARLES A. PLATT, ARCHITECT

pencil lines on drawings of this size. Where wash is used it is put on fairly dry. It does pucker the paper some, but that only lends atmosphere and a sense of reality.

In studying the originals of these drawings one is impressed with their completeness and with the application and patience which must have been necessary to make them. At this small size defects in composition are readily discerned. You are, so to speak, standing far enough away from the building to encompass the entire façade at a glance and thus are able more easily to determine whether the individual parts of the composition take their proper places in the ensemble. There is no deceptive drafting here, there are no center lines ending in dots, there are no silhouetted shade lines. The scale is so small that one cannot be lulled into a sense of achievement by some beautifully drawn piece of ornament. Enough to tell from these drawings that the center motif properly dominates, that the fenestration is restful, that the spot of ornament relates properly to its surroundings. Such as these are the fundamentals of a good design. If they are not right, no amount of detailed study will save it.

These sketches impress you with the ease with which the integrity of the values has been preserved. The dark of the glass in the windows is shown dark. The brick is given its correct value. The stone is rendered properly and the slate makes you conscious of the great dark mass of the roof itself. Many of the faults of the building come to light under scrutiny and can be remedied before it is too late. The shadows showing reveals and breaks are drawn and colored to indicate the exact depth of the break. The introductions of the trees, vines, and shrubs all tend to place the building in its environment and allow the designer to examine it critically.

To compare these drawings with the finished work brings out strikingly the accuracy with which they portray the completed job. It seems to me that too much cannot be said in speaking of their effectiveness. Mr. Platt is said to have remarked, while looking at a most alluring drawing by one of our skilled renderers, that such a drawing was an architectural menace and that when you got a drawing that made a building look as good as that you were tempted to stop studying it. I do not believe it has ever been successfully held that our best draftsmen have been our best architects. In fact, a fair case for the reverse might well be considered. I do not mean in any sense to infer that these sketches are not beautifully drawn. They are. I do mean that they were drawn primarily in a search for the truth in regard to the design. Considered so, they are wondrously successful.



PRELIMINARY SMALL-SCALE STUDY FOR A PROPOSED BANK AND CIVIC OFFICES
George T. Goulstone, Architect

CASTILIAN CHURCH, SEGOVIA, SPAIN—FROM A CONTE CRAYON DRAWING BY WILLIAM H. SCHEICK

Size of original, 16¼" x 11"

Office Efficiency Pointers, 2

The Shop Drawing System of Shreve, Lamb & Harmon

By Irving Coryell

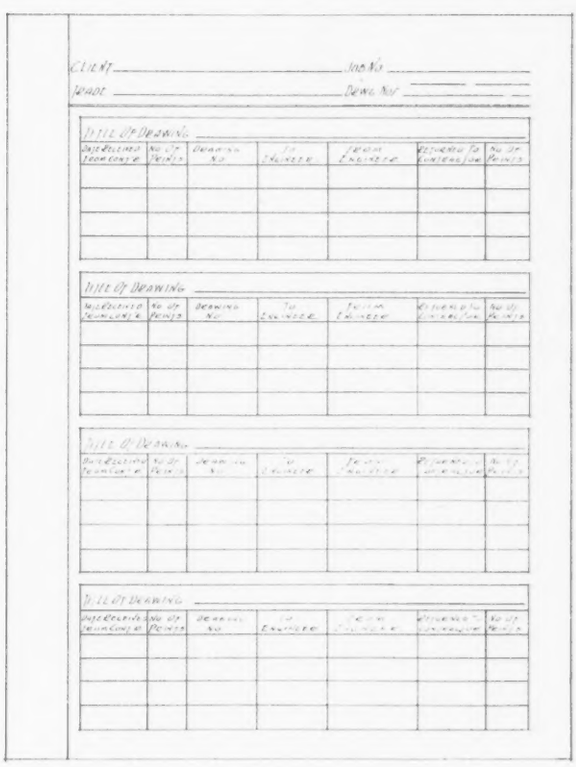
The habit of making prompt decisions is an excellent one for an architect to acquire; but if any benefit is to be derived from it, professionally, it must be constantly exercised throughout the life of each individual commission. Inasmuch as all work conducted by a modern general contracting firm is scheduled, and each trade has a definite date set on which to begin work, and an equally definite date on which to finish and leave the job, it will be readily seen that the lack of a decision regarding a window detail will delay not only the subcontractor who supplies this material, but will retard the work of all the trades that follow the setting of the windows as well. This leads to the job as a whole being finished behind schedule; and often cash penalties are imposed upon the general contracting firm for lateness, and all opportunity of earning a bonus is lost.

Naturally, happenings of this kind do not tend to foster the spirit of good-will and co-operation that is necessary to the expeditious erection of a building. The careful checking and early return of shop drawings will do more to promote this feeling than any other one thing. There is also another reason for promptness. The rapid return of the shop drawing enables the contractor and his subcontractors to effect an important saving in overhead expense that would not be possible if men assigned to the job had to waste a protracted period of time in waiting for the approval of the architect. The architect who does not keep the contractor waiting soon achieves a reputation for promptness which results in lower bids and in an attendant saving to the owner.

Shop drawings should be checked to determine not only the correctness of the information shown on the drawing itself, but also to ascertain whether or not the contract requirements are being complied with; whether or not the fabrication methods shown are sound; and whether or not the material will fit the conditions created by the adjoining trades. While in some cases shop drawings are merely forms, nevertheless the subcontractor should not proceed with the work until he has received, through the office of the general contractor, the architect's approval of the drawings.

Consequently, one of the essential functions of an architectural office is the inspection and correction of shop drawings. Lacking the intelligent correction and approval of these drawings no job could be brought to a successful conclusion. Yet many offices that ordinarily painstakingly correct shop drawings are at times lax in getting to the actual work, and dilatory in returning the drawings to the general contractor. Drawings, sometimes entirely innocent of red or yellow pencil marks and notations, are frequently found under drafting boards when a complaint is registered by the contractor. This condition is more recurrent in the average office than is generally supposed.

A system is a necessity, if prompt and proper service is to be rendered at all times. A shop drawing system, like any other system, should be as simple, as clear, and as concise as is consistent with thoroughness. It should require the minimum amount of time and the fewest possible number of forms to keep it in operation. There should be no red tape of any kind connected with it. It should be adaptable to the large office as well as to the small office; and it must work as efficiently on a ten-thousand-dollar house as it does on a million-dollar building.



THE SHOP DRAWING RECORD

Following a careful survey of many systems, the office of Shreve, Lamb, and Harmon established a method that definitely enables the architect to average two days from receipt of a shop drawing until it is returned to the general contractor, instead of the customary six- or seven-day average for offices using no system. Free-

dom from operating flaws and great latitude are proven by the fact that the system worked perfectly on a small alteration job on which eight shop drawings were submitted, as well as on the Empire State Building, on which 1786 shop drawings were submitted. Another advantage of this system is that only one form is required. This is the Shop Drawing Record—which may be typewritten, mimeographed, or printed, as desired. After the job is completed these forms may be placed in a storage file or destroyed.

An outline of this method follows—

1. The subcontractor is required to submit to the architect, through the general contractor, a number of copies of each shop drawing. This number will vary according to the set-up of the general contractor's organization, but will never be less than two prints, as one copy of each submission must be retained in the architect's file, and one copy must be returned to the general contractor. A form letter, conventional in style, accompanies the drawings from the general contractor's office to the architect. This letter reads about as follows—

> "Enclosed please find two copies of the hollow metal shop drawing number ten, titled 'Store Fronts—46th Street,' for your approval."

Upon receipt in the architectural office, the name of every man who is interested in that particular drawing is inserted at the head of this letter. Each man crosses out his name on this letter when he has completed his duties regarding the drawing.

2. A Shop Drawing Record is kept for each job by the architect. As the drawings are received they are recorded on this form. At the head of this form there are spaces in which are placed the name of the subcontractor, the job name and number, and the number of copies received. (The Shop Drawing Record also contains two columns in which are placed the dates on which the drawings are sent to the engineer—if they require structural checking—and on which they are returned to the architect.)

3. The contractor's letter and the drawings are now turned over to a draftsman for checking.

4. After correcting the drawings, the draftsman writes in the disposition of the drawing, whether "Approved," "Approved as Noted," or "Disapproved" at the head of the letter together with the date and his initials. He then fills out the Letter of Transmittal* that accompanies the drawings back to the general contractor.

5. The contractor's letter, which now contains information regarding the disposition of the drawing is turned over to the person who keeps the Shop Drawing Record. He transfers the information to the Record, initials the letter and sends it to the correspondence file where it is filed with any other letters pertaining to that particular drawing or subject.

The Record now contains the entire story of the submission. All dates appear in their proper columns, and "Approved," "Approved as Noted," or "Disapproved" appears under the heading "To Contractor," together with the number of the Letter of Transmittal that accompanies the drawings back to the general contractor.

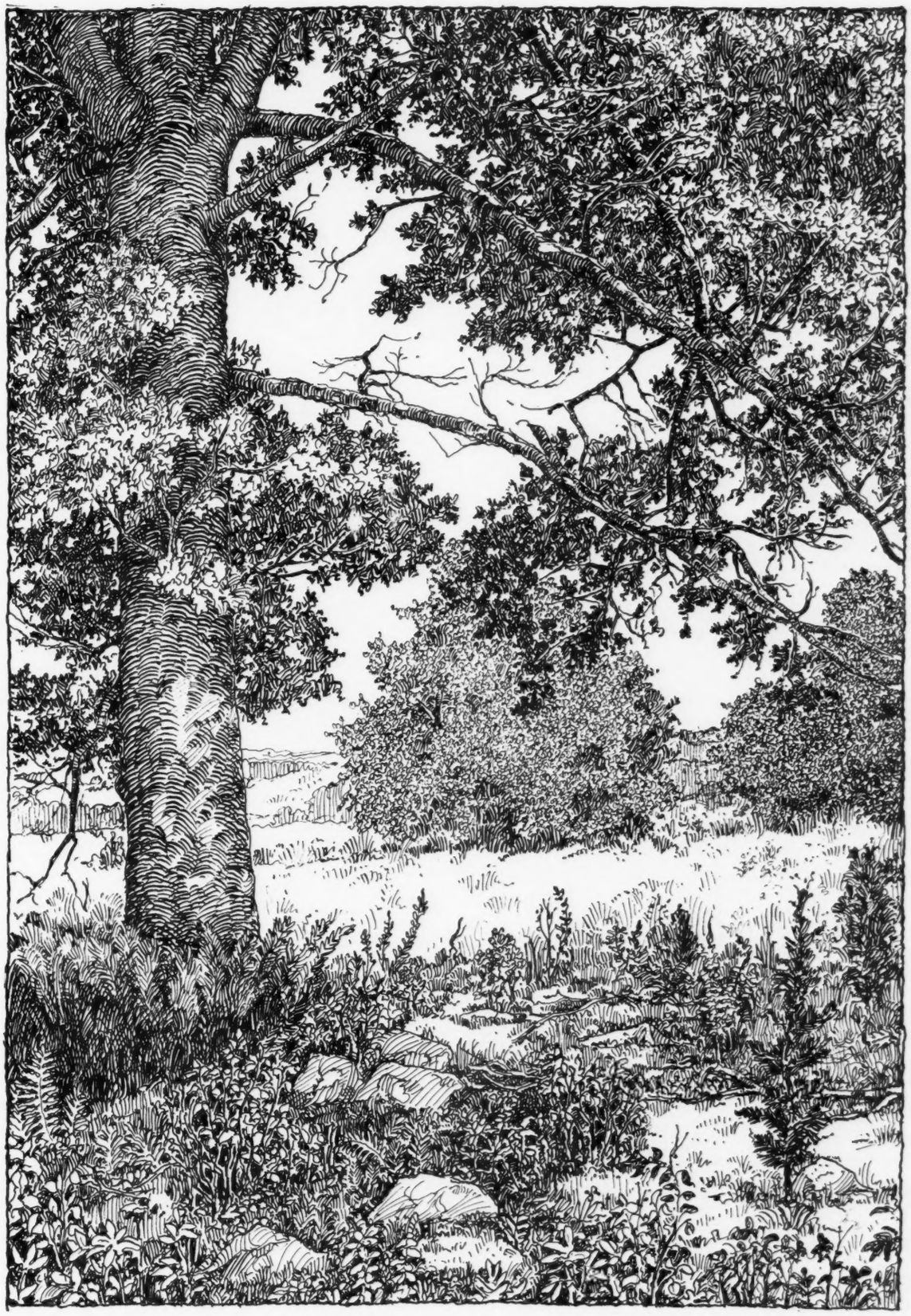
6. This process is repeated until final approval is obtained. While a reliable subcontractor may be trusted to begin the work when he has a drawing returned to him marked "Approved as Noted," the drawing, as a matter of record, must be resubmitted until it is finally marked "Approved."

As may be easily perceived, this method of handling shop drawings can be used to the same advantage in either the large or the small office. In a one-man office, the system would vary only in that the architect himself would check the drawing, keep the Record, and file the correspondence.

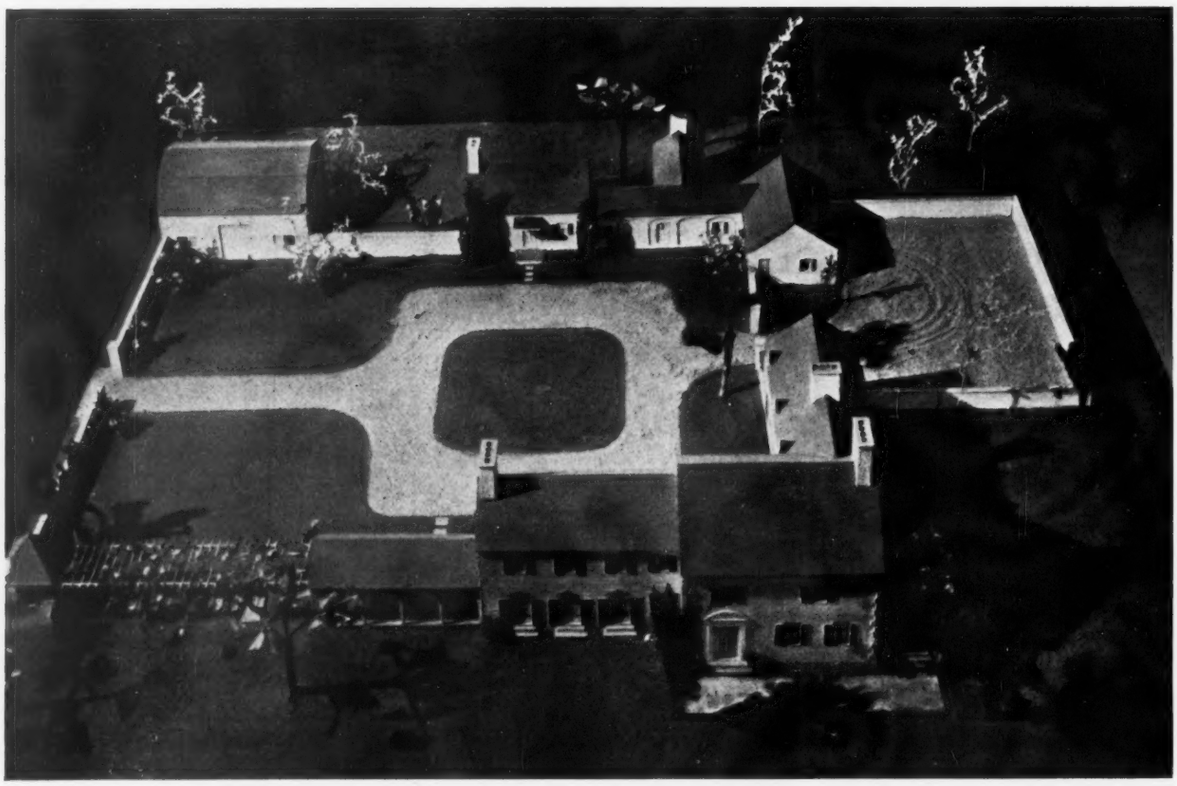
For an office of slightly larger size, where two or three draftsmen and a stenographer are employed, one of the draftsmen would check the drawing and keep the Record. After the drawing is checked, it would be turned over to the architect, together with the Letter of Transmittal, and the contractor's letter. The architect would then countersign the Letter of Transmittal and turn it and the drawings over to the stenographer, whose duty it would be to file the contractor's letter and one copy of the corrected drawing, and to despatch the remaining corrected drawings and the Letter of Transmittal to the general contractor.

In all cases, the full details of the submissions of each drawing would appear on the Record, and a glance at this sheet would at once reveal the status of any drawing in question.

**Detailed information and an illustration of the Letter of Transmittal was published in the March, 1933, issue of* PENCIL POINTS.



A TREE STUDY IN PEN-AND-INK BY ERNEST F. LEWIS
Size of original, 8¼" x 11½"



Photos by Glasgow

MODEL OF HOUSE FOR PHILIP J. WARNER, ESQ., AT DARIEN, CONNECTICUT

FRANK J. FORSTER AND R. A. GALLIMORE, ARCHITECTS

THE MONOGRAPH SERIES

RECORDS OF EARLY AMERICAN ARCHITECTURE
AS SOURCE MATERIAL

EDITED BY RUSSELL F. WHITEHEAD, A·I·A

VOLUME XIX

MONOGRAPH FOUR

Some Old Houses of Pigeon Cove, Massachusetts

BY THOMAS WILLIAMS

Photographs by Arthur C. Haskell

Thirty miles northeast of Boston, Cape Ann juts out into the ocean, a rocky island of many rocks and ledges. Rather barren inland, with bouldered pastures, swamps, and tangled thickets, its perimeter is settled almost continuously with a series of attractive villages which cluster around the harbors and coves, straggling out along the highway and shore.

Originally the whole cape was in the town of Gloucester, although from early days there were two *nuclei* of settlement. One was built around the "harbor," Gloucester, and the "cut" through the marshes which from early days made the cape an island and gave the fishing boats a short and easy passage to Annisquam behind the shelter of the cape. "Sandy Bay," on the ocean side of the cape, settled later, became the second and less important center of population, numbering by the time of the Revolution about 400 people.

Sandy Bay organized a separate parish in 1754, and finally in 1840 incorporated as the town of Rockport. Pigeon Cove, whose old houses form the subject of this monograph, is the "North Village" of Rockport, and includes the ocean shore of the extreme tip of Cape Ann. The cove itself, whose sandy beach was formerly partially sheltered by a dyke of rocks called "The Pillions," is now protected by a breakwater which affords complete shelter for many small fishing boats and an occasional coal barge, while the beach has disappeared under the highway and the forge of the Cape Ann Tool Company.

At the opening of the seventeenth century, Sandy Bay and Pigeon Cove presented an appearance far different from that of today. Champlain in 1605 described Rockport and its three islands (later named by Capt. John Smith the "Turks' Heads") as heavily wooded. The shore probably closely resembled the wooded portions of the Maine coast today. Many residents remember the last stands of primeval pines in Annisquam, along Goose Cove and around the "Old Dennison House" (described in *The Monograph Series*, Volume XIX, Number 1) which used to bring visitors from miles around until at last they succumbed to the lumberman. Such forests, so convenient to water transportation, from early times attracted the woodcutters, who, toward the end of the seventeenth century, found considerable profit in cutting and selling timber which was transported to Boston, and thence perhaps to England, in sloops loaded at Gap Head and Pigeon Cove.

The town early realized the importance of the timber on the Common land and took steps to conserve it, and at the same time to encourage the development of the infant local shipbuilding and shipping industries. Thus, in 1669, "It was agreed that there should be no cordwood sold out of town under three shillings and sixpence per cord." For several successive years, each family was permitted to cut twenty cords on the town's Common for its own use. In 1698, "Liberty is given to the gentlemen of Boston that is concerned in building a ship heare in the towne of Gloucester to get what

timber is needful upon the towne's common land, provided they employ such men of the towne as are capable of working upon the ship." Again, in 1702, certain persons were granted timber from Common land for shipbuilding, but "the said personses is to pay to the towne three shillings pr tunn in case the said Sd Sloop be sold or disposed of out of towne before six years be expired x x." By 1706, in spite of all restrictions, thirty sloops were employed in the timber trade on the inside portion of the Cape alone, a number reduced to eighteen by 1710.

A second important attraction to the early settlers of Cape Ann was the abundance of fish in its surrounding waters. One of the earliest enterprises of the Plymouth Colony was the establishing at Gloucester Harbor in 1624 of a landing stage and the founding of a small settlement to serve as a base for the pursuit of the fishing industry. This effort was doomed to failure, but the settlement of Gloucester remained permanent and was destined to develop the very prosperous fishing industry which is still carried on today.

Of course, trade early became an important occupation in this maritime settlement, whose remoteness also, perhaps, encouraged smuggling. In 1700, the Earl of Bellamont wrote to the Lords of Trade of the unlawful trade of the Colony, "If the merchants of Boston be minded to run their goods there is nothing to hinder them," and "'tis a common thing, as I have heard, to unload their ships at Cape Ann, and bring their goods to Boston in wood-boats."

Records are entirely lacking as to the details of the early settlement of Sandy Bay; although we know that Richard Tarr, who during the last quarter of the seventeenth century built his cabin near what is now Rockport Harbor, was the first permanent settler. It is certain, however, that prior to that time fishermen from Chebacco (now Essex) and Ipswich, towns on the mainland to the northwest, had established posts at Gap Head and Pigeon Cove, built huts, and made these points their temporary abode.

Champlain had found the Indians at "Cap des Isles," as he called Cape Ann, very amiable, although he was much on his guard against them; and later visitors and settlers seem to have had no serious trouble with them. The whole district, however, was terrified of the Indians during King Philip's War, and the Indian attacks came alarmingly close to the towns of Chebacco and Ipswich, whose fishermen were using Gap Head and Pigeon Cove as bases. In March of 1676, spurred on by the peril, a committee of the General Court reported that Cape Ann "had made two garrison houses, besides several particular fortifications."

Back from Pigeon Cove, on the top of a low hill, to the north, stands the "Old Garrison House," in more recent years known as the "Witch House." Although documentary evidence is lacking, it seems a reasonable assumption that this was built for the protection of woodcutters and fishermen, whose temporary huts offered scant security against Indian raids, and that it was one of the two garrison houses referred to by the Committee of the General Court in 1676. This assumption is borne out by the character of the building, whose exterior walls are of square-hewn logs of hard pine or tamarack, 7 inches thick and strongly dovetailed at the corners; with a second story overhang of about a foot which originally existed on all four sides.

The log construction below this overhang shows such careful workmanship on the very hard wood that the cracks between logs are in many places very difficult to find. Above the second floor level, however, the chinks are quite wide in places, suggesting that the builders may have been hurried by approaching Winter.

The framing of the first floor ceiling, which cantilevers out to support the overhang, is very unusual with hard pine beams about five inches by seventeen inches moulded at the edges and laid flat, three on each side of the chimney. The spaces between these beams, about thirty inches, are spanned by the single thickness of 1½-inch floor planks without the aid of joists. The oak end girts and chimney girts, about seven inches wide by twelve inches deep, also cantilever through the walls and help support the overhangs.

The cellar and second floor ceilings are constructed in the usual seventeenth century manner, with "summer" beam supporting floor joists. The roof is of purlin construction, with vertical boarding.

How crude the original house must have been! With no outside sheathing, unplastered, not even chinked, its occupants were at the mercy of every wind. The primitive character of the original finish is indicated by the fact that, with the possible exception of the plank partition which supports the stair, all of the original interior work has disappeared in the course of many alterations, the first of which must have been begun as soon as the building was permanently occupied. The original chimney also succumbed to some eighteenth century alteration, probably because of inferior construction of underburned bricks and clay mortar.

The restored "Fire Room" is probably a fairly accurate representation of its original appearance. The hard pine sheathing, though not original, is of the period, and the fireplace and hearth have been rebuilt on their old foundation on the model of a nearby original. The walls have been stripped of later plaster to what was undoubtedly their original state. The addition of the furniture, which is American of the

general period of the room, completes the picture, giving us a very unusual opportunity to see how these primitive early rooms really did look.

The living room, the fireplace end of which is illustrated, exhibits simple arrangement of a fireplace and pine doors and trim, which were installed in the early portion of the house in the late eighteenth century.

pedimented doorway (saved from the wreckage of an old Essex mansion) to take the place of the original, which had disappeared. In this eighteenth century ell are the dining room, with its unusual gouge-work over the fireplace, and the chamber with the deep chimney breast.

A series of nineteenth century additions, including the Victorian bay windows, make the house a mixture

THE THOMAS KNUTSFORD (STOCKBRIDGE) HOUSE—BUILT IN 1753—
PIGEON COVE, CAPE ANN, MASSACHUSETTS

The exterior of the house shows many additions to the original blockhouse; the first one was the ell to the north, which was probably built shortly after a transfer of the property in 1778, and is two and a half stories high with a stair hall and one room on each floor. The east end of the house was brought up to date during this alteration by the removal of the overhang at that end. The present owners installed the

of styles but give to it a picturesque outline and a feeling of having been lived in, which makes it very unusual among old houses.

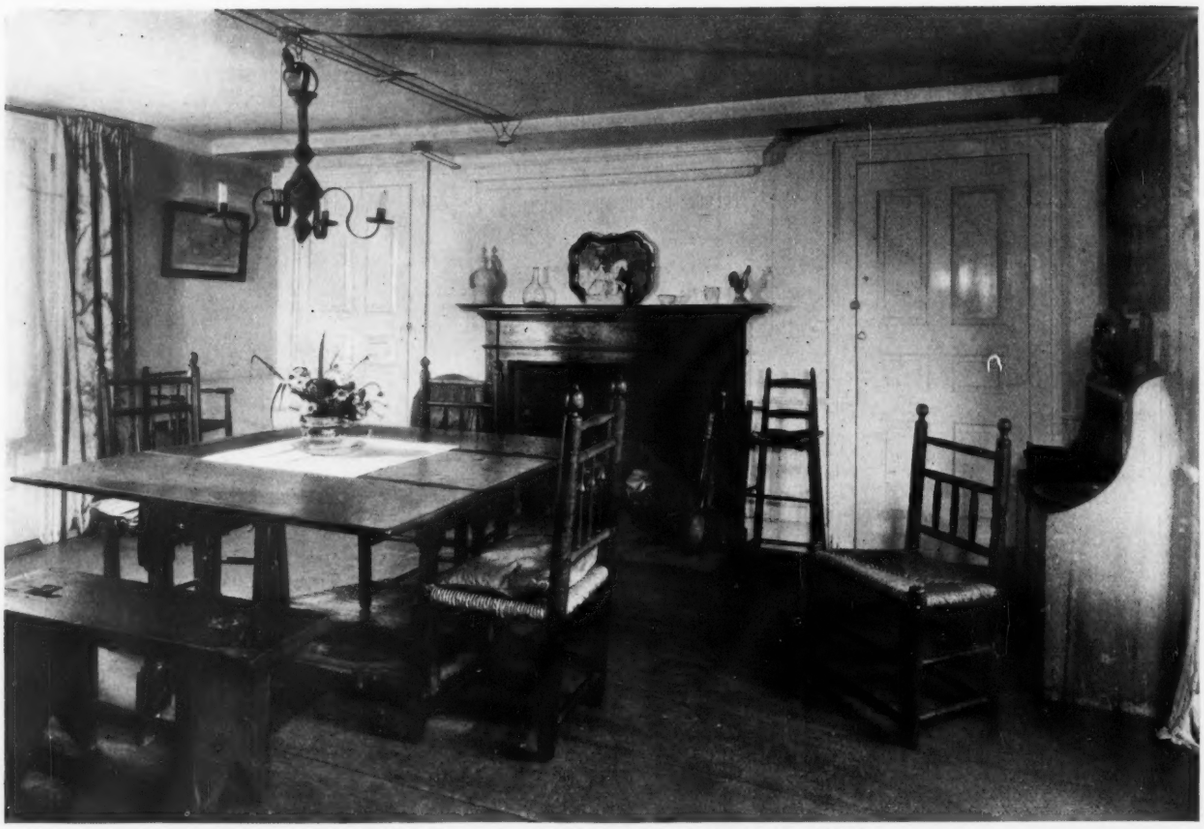
In August, 1692, in the course of the witchcraft trials at Salem, John Procter and his wife, Elizabeth, were convicted and sentenced to be executed. He was hanged, but she, on account of pregnancy, was released on condition that she leave Salem. It is the tradition

Bay Window Added in Nineteenth Century

Doorway—Garrison House Portion

OLD GARRISON HOUSE—"WITCH HOUSE"—PIGEON COVE, CAPE ANN, MASSACHUSETTS

OLD GARRISON HOUSE—"WITCH HOUSE"—PIGEON COVE, CAPE ANN, MASSACHUSETTS

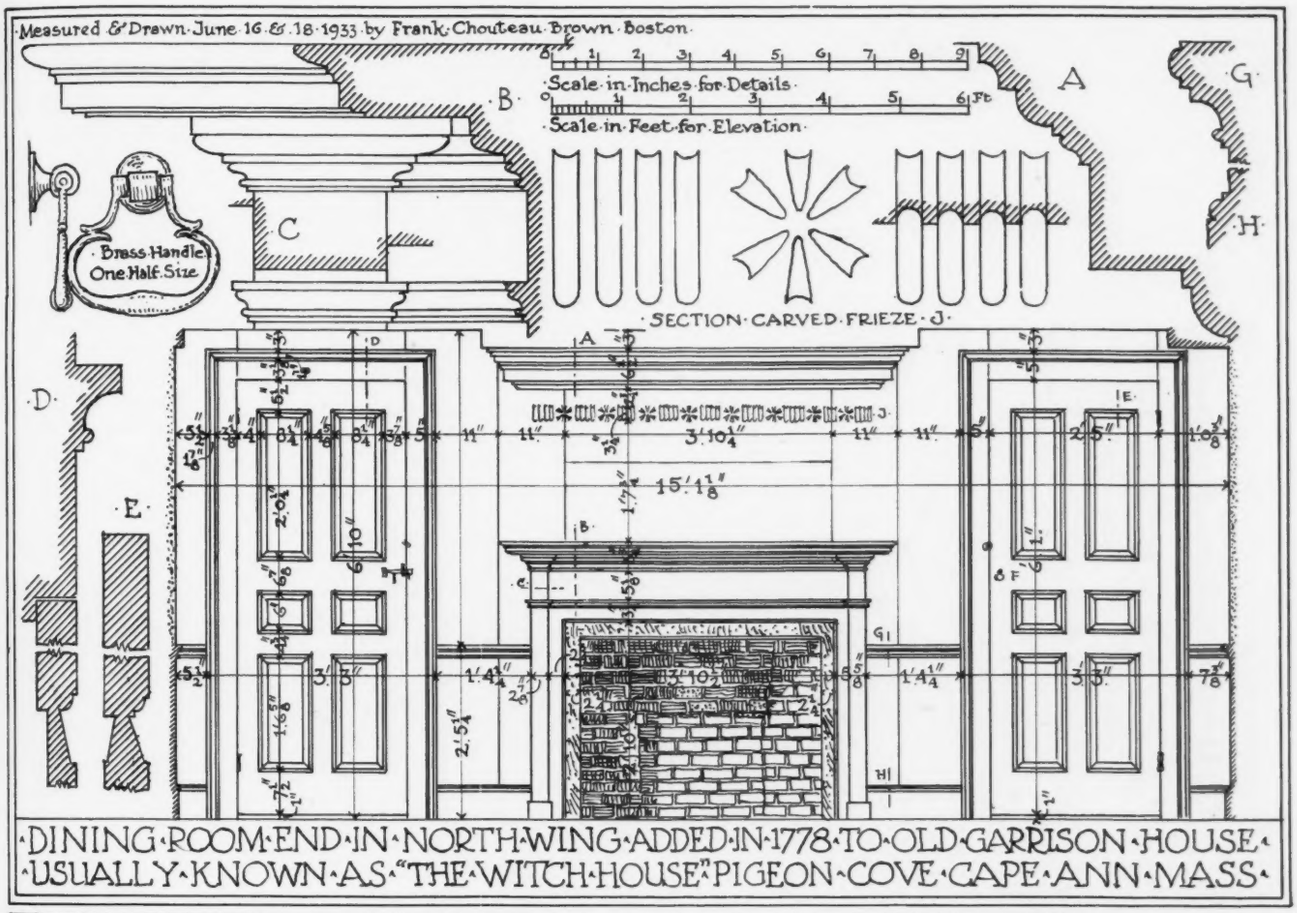


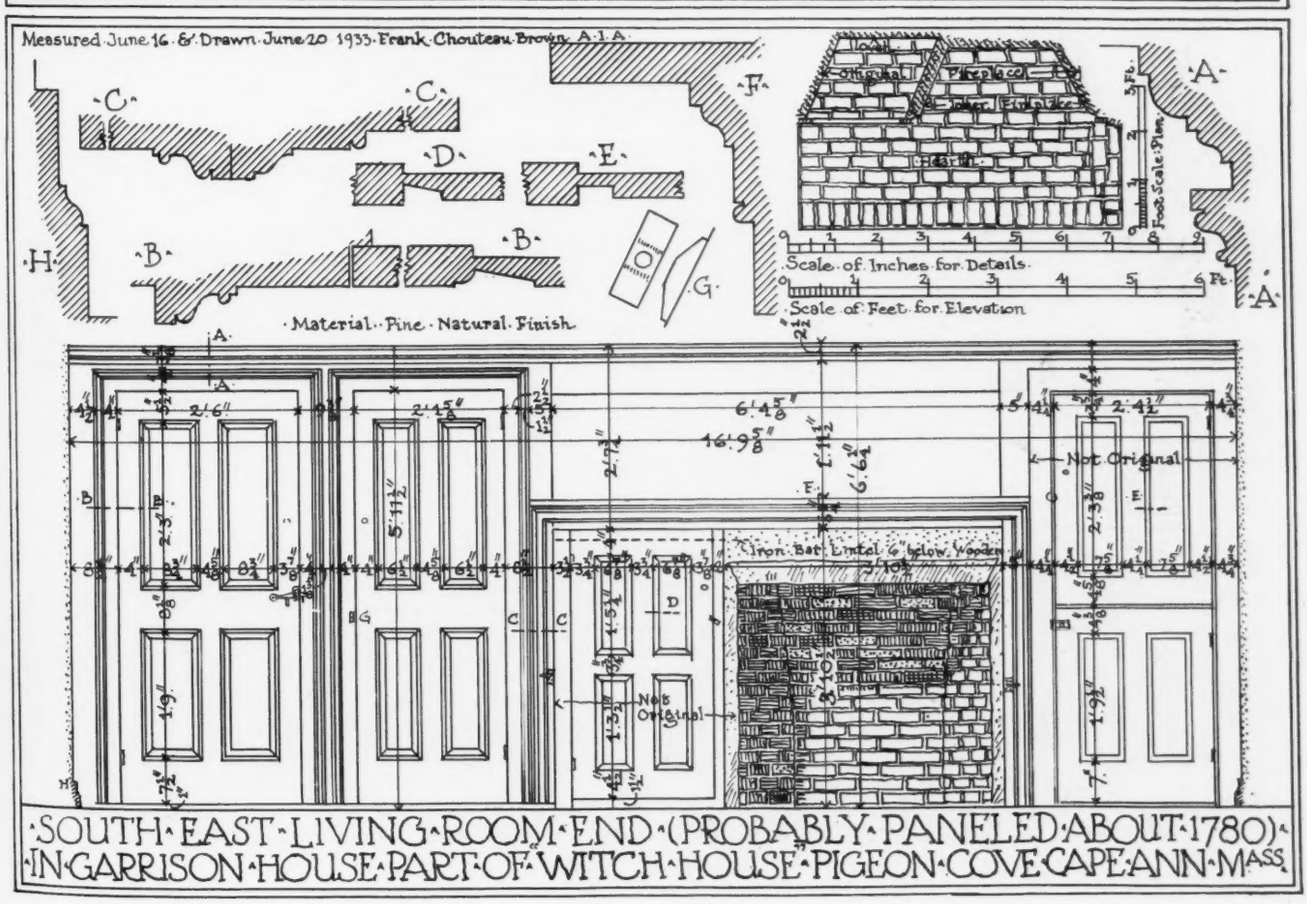
Dining Room End in North Wing Added in 1778

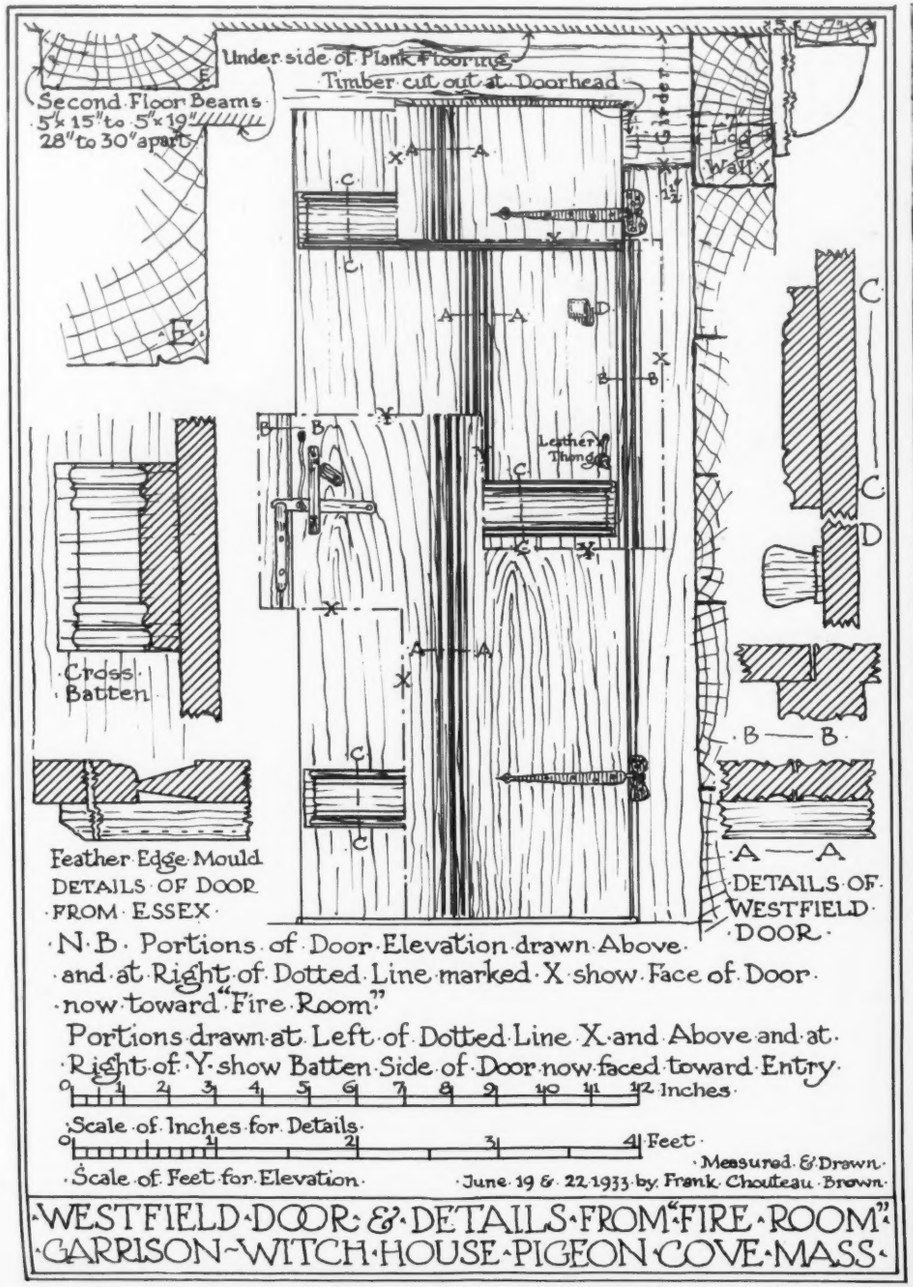
Southeast Living Room—Garrison House Part

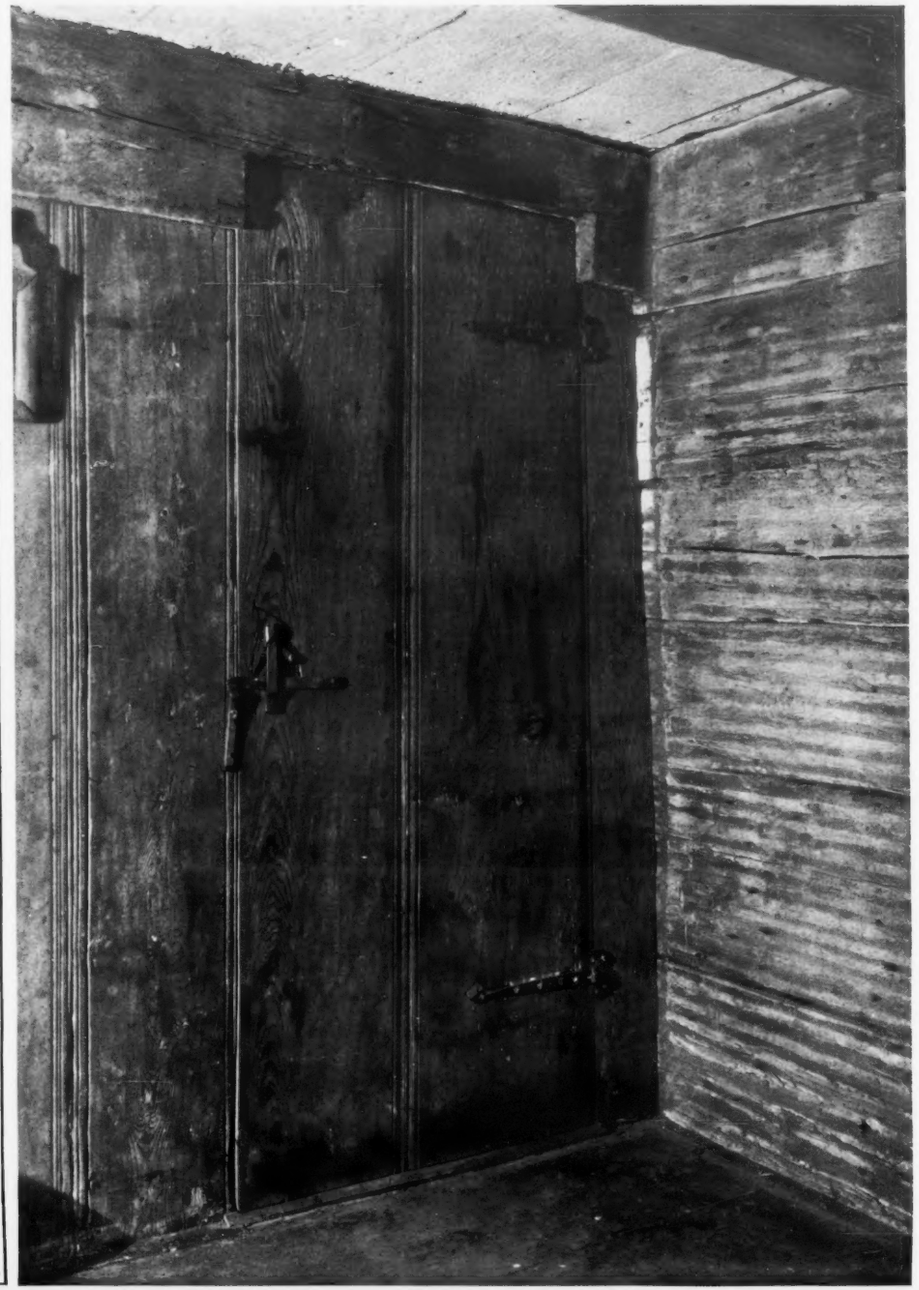
THE "WITCH HOUSE," PIGEON COVE, CAPE ANN, MASSACHUSETTS

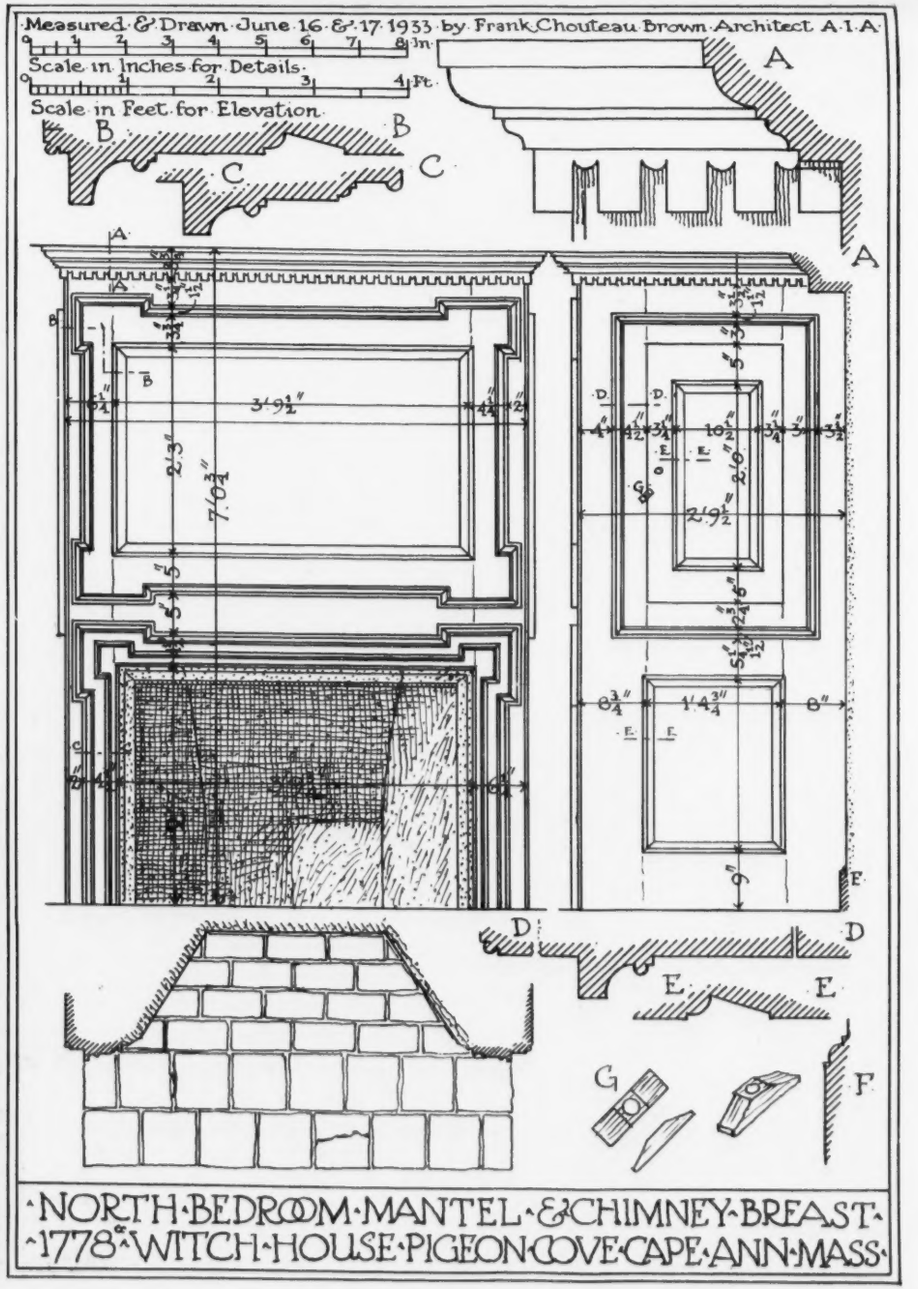
[54]


Measured & Drawn June 16 & 18 1933 by Frank Chouteau Brown Boston
Scale in Inches for Details
Scale in Feet for Elevation
Brass Handle One Half Size
SECTION CARVED FRIEZE J
DINING ROOM END IN NORTH WING ADDED IN 1778 TO OLD GARRISON HOUSE
USUALLY KNOWN AS "THE WITCH HOUSE" PIGEON COVE CAPE ANN MASS


Measured June 16 & Drawn June 20 1933 Frank Chouteau Brown A.I.A.
Material Pine Natural Finish
Original Fireplace
Scale of Inches for Details
Scale of Feet for Elevation
Not Original
Iron Bar Lintel 6" below Wooden
SOUTH EAST LIVING ROOM END (PROBABLY PANELED ABOUT 1780)
IN GARRISON HOUSE PART OF WITCH HOUSE PIGEON COVE CAPE ANN MASS


Under side of Plank Flooring
Timber cut out at Doorhead
Second Floor Beams
5"x15" to 5"x19"
28" to 30" apart
Leather Thongs
Cross Batten
Feather Edge Mould
DETAILS OF DOOR FROM ESSEX
DETAILS OF WESTFIELD DOOR
N.B. Portions of Door Elevation drawn Above and at Right of Dotted Line marked X show Face of Door now toward "Fire Room"
Portions drawn at Left of Dotted Line X and Above and at Right of Y show Batten Side of Door now faced toward Entry
Inches
Scale of Inches for Details
Feet
Scale of Feet for Elevation
Measured & Drawn June 19 & 22 1933 by Frank Chouteau Brown
WESTFIELD DOOR & DETAILS FROM "FIRE ROOM" GARRISON-WITCH HOUSE PIGEON COVE MASS

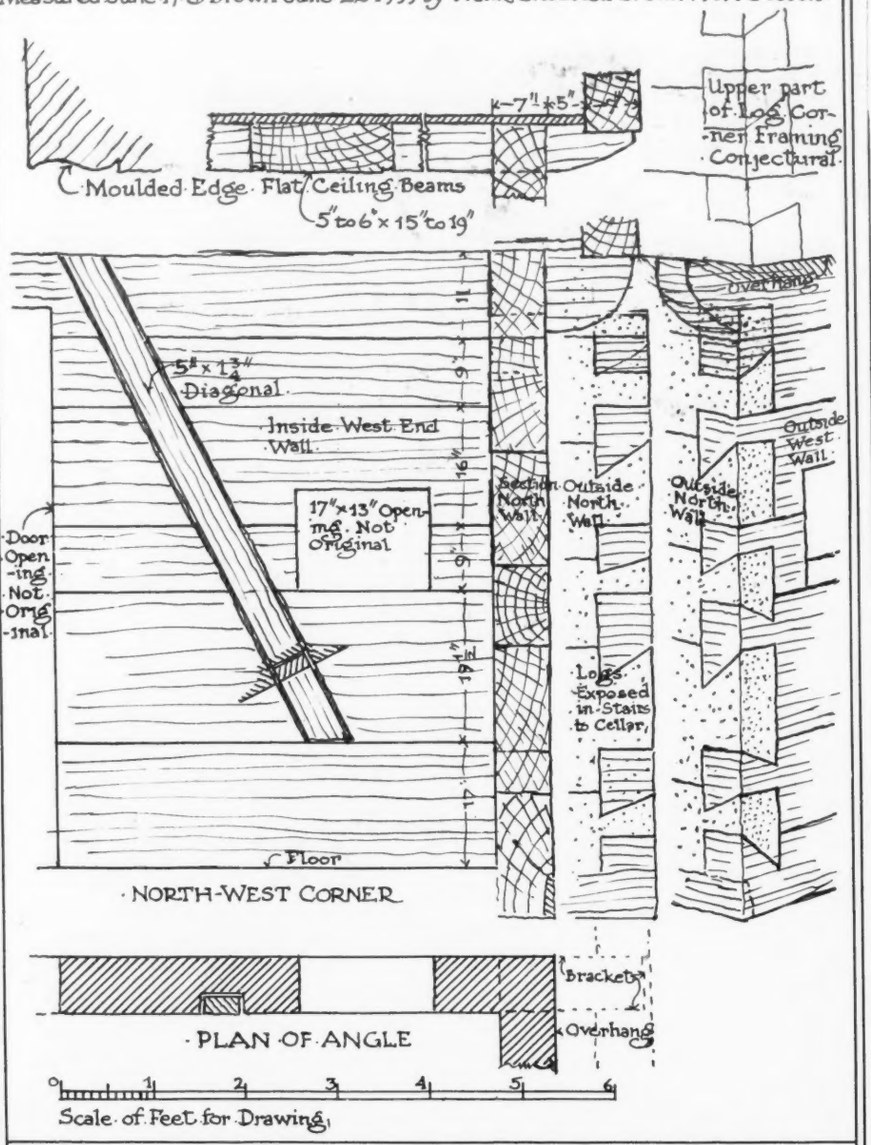




NORTH BEDROOM MANTEL & CHIMNEY BREAST
1778 WITCH HOUSE PIGEON COVE CAPE ANN MASS

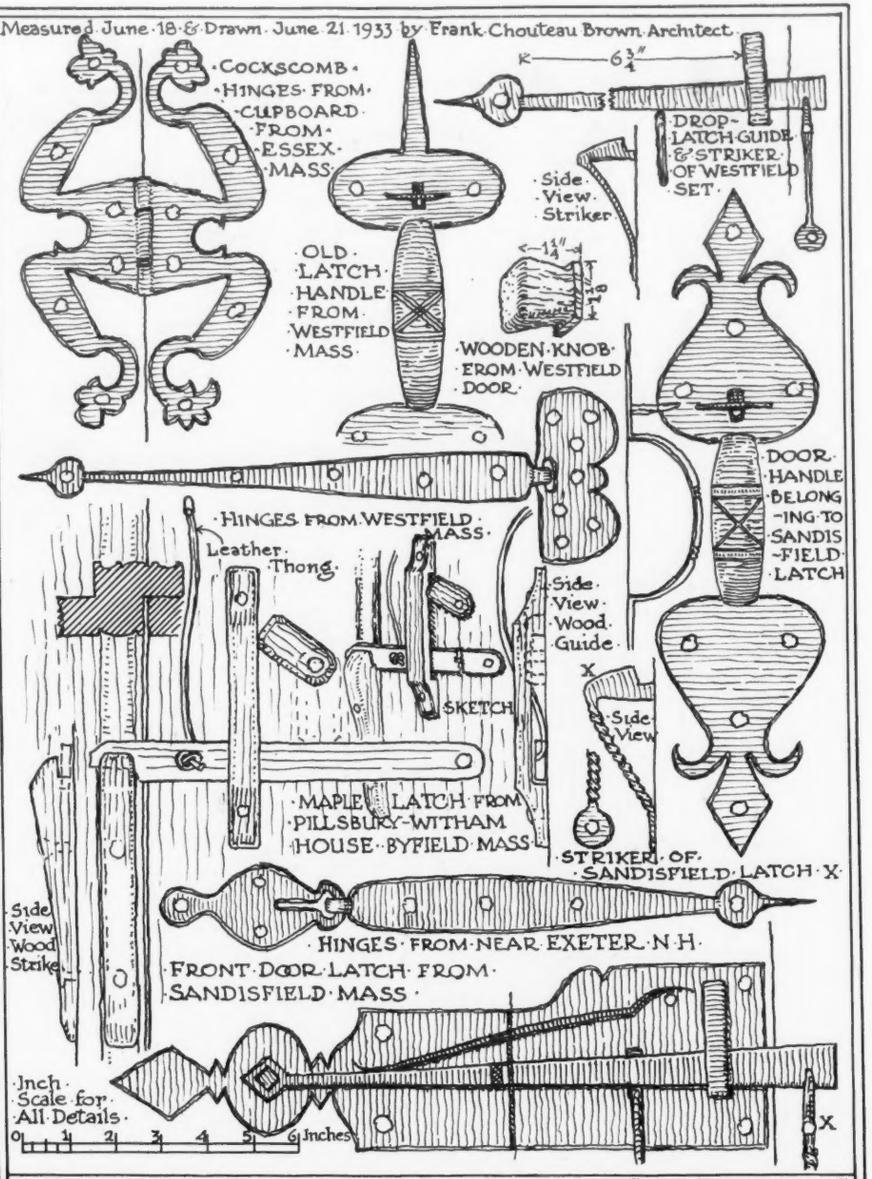
[58]

Measured June 17 & Drawn June 22 1933 by Frank Chouteau Brown A.I.A. Boston



LOG GARRISON ROOM ("FIRE ROOM") 1676
GARRISON-WITCH HOUSE PIGEON COVE MASS

Measured June 18 & Drawn June 21 1933 by Frank Chouteau Brown Architect



MISCELLANEOUS DOOR FITTINGS IN "FIRE ROOM"
GARRISON-WITCH HOUSE PIGEON COVE MASS

LIVING ROOM—"WITCH HOUSE"—PIGEON COVE, CAPE ANN, MASSACHUSETTS

"THE CASTLE"—1678—PIGEON COVE, MASSACHUSETTS

that her children gave her refuge in this house, hence the name "Witch House" which in recent years has been applied to it rather than the older and more appropriate one of "The Garrison House."

Overlooking the south side of Pigeon Cove is "The Castle," another weatherbeaten survivor of the earliest settlement of the "North Village." Tradition ascribes to this house the date 1678, which is borne out by many details of its construction; the "hewn" overhang, the steep pitch and purlin construction of the roof, the heavy framing with deeply chamfered "summer" beams and "gunstock" posts, and the low ceilings.

This house, too, has changed with the times. Its chimney was rebuilt in the eighteenth century; rooms were plastered and paneled; a leanto was built, removed and rebuilt; all according to the changing tastes and fortunes of successive owners. Now, through the generosity of its last owners, the Story family, it has been presented to the Pigeon Cove Village Improve-

Fireplace in East Room

Fireplace in Living Hall

"THE CASTLE"—1678—PIGEON COVE, MASSACHUSETTS

[61]

ment Society, who have preserved and repaired it and hope eventually to furnish it appropriately. The kitchen has been restored to an approximation of what must have been its original appearance, while the parlor shows paneling and cased beams of the early eighteenth century, with a dado apparently made of moulded boards used originally for vertical sheathing.

The "Gott House," on Halibut Point, the extreme point of the Cape, was built by Samuel Gott, who came from Wenham in 1702, and by whose descendants it is still owned and occupied. Probably the oldest gambrel-roofed house on the Cape, it offers an amusing example of a "jutby," that New England way of cutting a corner out of a house in the manner of a piece of cheese! The interior boasts two simple corner cupboards, but aside from that is unelaborated; one room-end sheathed, another paneled simply, the stair enclosed in a sheathed partition.

The Thomas Knutsford House was built in 1753 by Benjamin Stockbridge by whose name it is sometimes called. It faces south in the manner of early houses, away from the road, and is very attractive with its steep gambrel roof and tiny ell. It derives its name from Thomas Knutsford, Jr., a grandson of Stephen Knutsford and Mary Andrews, whose romance it recalls. *(Illustrated on page 51.)*

Mary Andrews was a beautiful and romantic girl who grew up in Pigeon Cove, and at the time of the Revolution was living, with her parents, in the woods near the shore. Given to day dreams, she fell in love with one of her visions, of whom she often dreamed; a handsome young man in uniform, who came from over the sea to be her husband. Sometimes in her dreams she conversed with him; they plighted their troth; then she would seem to see him lying injured on Andrews Point. She used to wander often to the spot, in hopes of finding him. But the years passed, and Mary Andrews seemed destined to remain a spinster. 'Till one day in 1778, wandering on Andrews Point she did find him there exhausted, lying with his head on his arm; young, handsome, in a British uniform! She revived him and brought him to her home; eventually he became her husband. A man of education and breeding, his origin was always clothed in mystery; whether because he was an escaped prisoner, a deserter, or whatever the reason, he never disclosed his story to his neighbors or communicated with his family. Their marriage was very happy, they had eight children and he taught school in the community until his death in 1807.

This community was poor and remote. These houses and many others of later date which still remain possess little elaboration either of plan or of architectural detail. Their scale, however, is almost invariably consistent and unbelievably small, with very low ceilings, doors of reduced size, and tiny details by which these small houses achieve a great measure of spaciousness and dignity. Built altogether of wood by men who had learned its qualities in building ships as well as houses, they show throughout a right use of this material. As we prepare to study the problem of the small house in the light of new materials and modern methods of production, let us learn what we can from these early solutions of a similar problem.

(Courtesy of Oliver E. Williams)

THE "WITCH HOUSE," PIGEON COVE, MASSACHUSETTS

Picture from Pictorial National Library (Magazine) for 1849

THE "GOTT HOUSE"—1702—HALIBUT POINT, PIGEON COVE, MASSACHUSETTS

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STAIR HALL—THE LEE MANSION—MARBLEHEAD, MASSACHUSETTS

[64]

Ripley's Recipes, 3

By Hubert G. Ripley, F. A. I. A.

"Nectaries of balmier sweets than sips
The Hymettian bee—"

"Rhododaphne," THOMAS LOVE PEACOCK.

Old Fashioned, Sazarac, and Swizzle

One day Napoleon remarked to the Marquis de Laplace, mathematician, astronomer, and Senator of France, author of the "Laws of Laplace," according to which Jupiter, Saturn and other heavenly bodies perform certain celestial syncopations hitherto unexplainable, "Why is it," said the Emperor, "that when I melt a lump of sugar in a glass of water, the beverage appears to be more potable than when a like quantity of powdered sugar is used?"

"Sire," replied the learned man, "three substances exist whose principles are exactly the same, viz.: sugar, gum, and starch. They differ only under certain conditions, concerning which nature guards the secret. I have a theory that, due to the shattering of the crystals by the pounding of the pestle, certain sugared portions pass to the state of gum or starch, which cause the different flavor your majesty has remarked." (Brillat-Savarin, *Physiologie du Gout.*)

The above principle is the secret of the Old Fashioned. It is also the essence of an *Absinthe Sucre*, that devastating beverage whose devotees imagined they were performing feats of levitation after partaking a given number. An incident that happened one evening, during the celebration that occurred after the annual boat races between two rival Universities, illustrates the potency and impelling force of this legendary tipple. On one of the many luxurious craft gathered in the bay for the fiesta, a party was in progress. Absinthe Cocktails (a barbaric concoction of Bœotian taste that once had a certain vogue, alas!) were being served freely. A robustious young Antæus who had downed glass after glass as fast as they came his way, suddenly climbed the lee shrouds, and before he could be stopped, dived gracefully over the rail. A passing launch, one of a number of patrols alert for such happenings, overhauled him in the gathering gloom just as he was heading for the open bay. "Want a lift?" the captain shouted. "Get out of my way!" cried Antæus, "I'm swimming 'round the world!"

The Old Fashioned, however, doesn't play one such tricks as that. It's probably the oldest cocktail known to man, 162 yrs., 9 mos., 14 days, reckoning old style, since first invented by Betty Allen (or Daisy, if you prefer). The so-called cocktail of today is more apt to be a "Sour" or a "Punch," or some variety of the myriads of miscellaneous fancy drinks, or mayhap a "Shrub" or "Flip." There are only a dozen or so mixes, that properly come within the category of the cocktail, which is simply liquor stirred or shaken with ice and a dash of bitters, of which there are several varieties that may be employed according to the fancy of the composer. Sometimes a few squirts of syrup or cordial are added to make a richer blend, and the glass may be dolled up like a Christmas tree with lemon peel, bits of pineapple and cherries, and embellished with powdered sugar stuck on like frosting around the rim, in which case the cocktail becomes a "Crusta." Over-scrupulous concoctors are very fussy about their bitters—for inferior bitters, or too much of certain kinds, will ruin the finest old liquor ever vatted. Professor Jerry Thomas used to make his own bitters out of raisins, cinnamon, snake-root, lemon, orange, cloves, allspice and Santa Cruz rum, using about an ounce of each (except two ounces of cinnamon and ¼ lb. raisins), filling up the decanter with rum, and, as fast as the bitters were used, adding more rum, thus keeping a continual supply on hand. Good bitters, like the Muria and Garum of Ancient Rome, are a gift from the gods. However, those who do not care to go to the trouble of preparing their own bitters may find excellent Angostura, Pechaud's, and Orange Bitters, at most any pharmacist's. Go to the back of the store, past the club sandwiches, magazines, and kiddie-kars, and ask the gray-haired old gentleman who presides over the little drawers containing senna leaves, Fuller's earth, and *cascara sagrada;* he'll know what you mean and probably find it after searching ten minutes or so in the back room.

The Old Fashioned. The right glass for the Old Fashioned is essential. A squat heavy tumbler holding four to six ounces is best; one with a thick rounded bottom on the inside, and a broad sturdy base that won't tip over. We have some small tumblers with underslung bodies and little concave scallops on the lower half that fit the fingers nicely (thumb-print tumblers, some call them), bought at the five and ten, that are just the right size for nestling in the hand. When we went back to buy some more, they were all gone, just a remnant of some manufacturer's stock, I suppose. Place half a lump of sugar in the bottom of the glass, on this squirt a few drops of Angostura, a goodly piece of fresh lemon peel twisted before dropping in, a teaspoonful or a little more of cold water, one or two fairish pieces of ice and a double portion of the best old Rye or Bourbon "the market affords," as the specification writers say. Stir this softly and tenderly with an after-dinner coffee spoon, the while indulging in polite conversation and airy persiflage. Sip the nectar gently, savouring its bouquet while time stands still. The consumption of the Old Fashioned should never be hurried. Do not, as is the custom of many, crush the sugar with a bartender's pestle, for, as Laplace pointed out to Napoleon, uncrushed sugar enhances the flavor of any beverage, and this applies particularly to the Old Fashioned, whose ingredients

are so simple that the greater care is essential in their preparation.

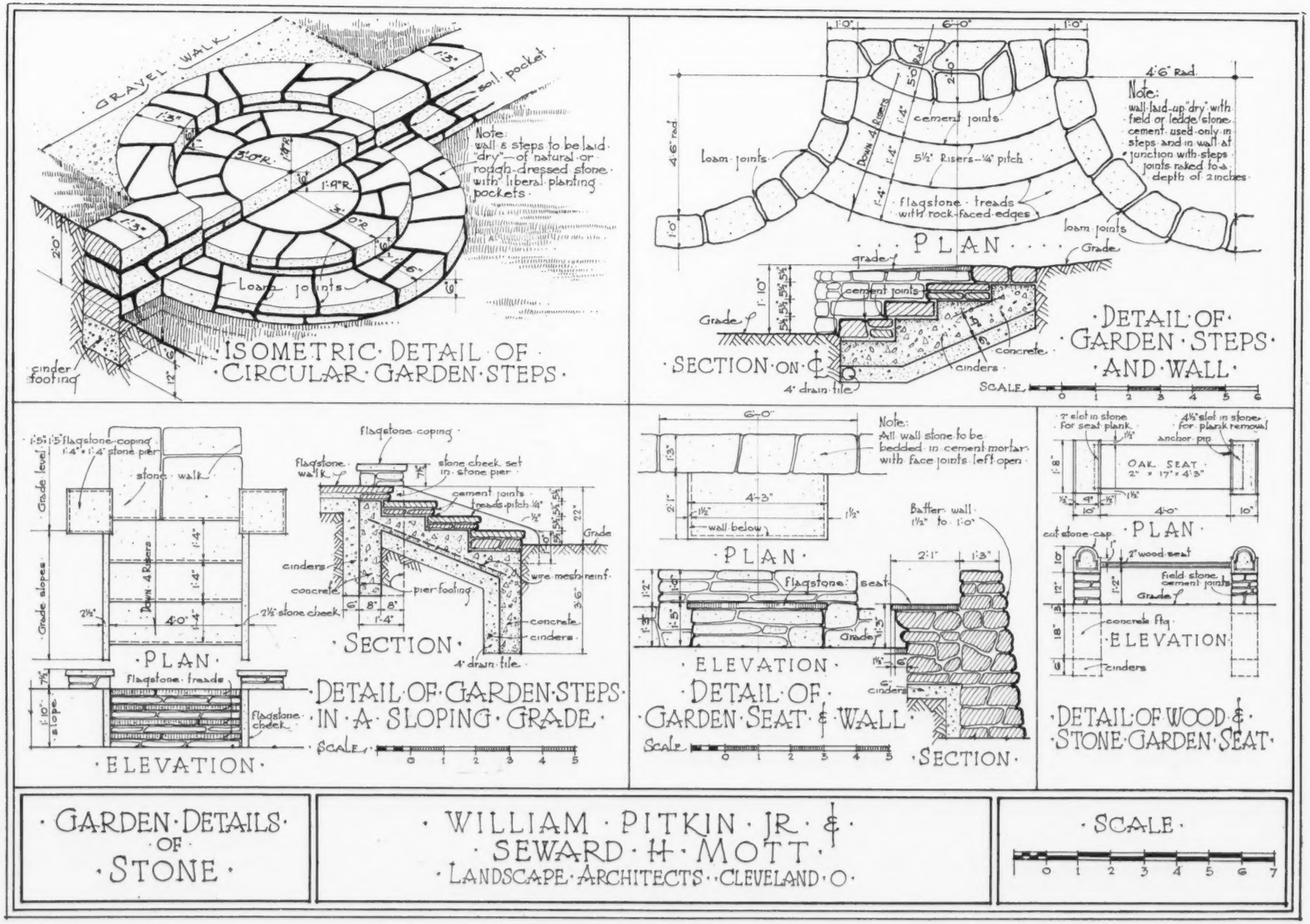
Alice uses orange instead of lemon when she makes her Old Fashioned, and while we cannot quite approve the substitution, I must say Alice is a splendid girl, and her concoctions most palatable.

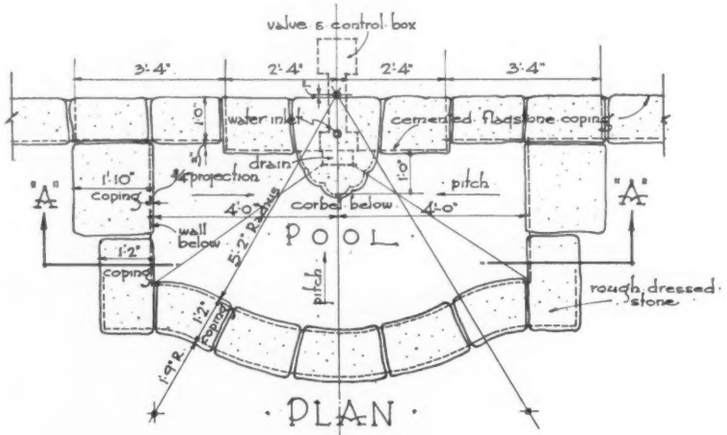
There's a famous cocktail whose habitat is New Orleans called the *Sazarac*. It is a variation of the Old Fashioned, a second movement, so to speak, of a Symphonic Poem. Years ago a fine old Southern gentleman from Louisiana, then in his seventies (he had served with distinction in the Civil War), tall, straight as a ramrod, gray-haired and vigorous, imparted to me the secret of this notable beverage. It was during a visit to relatives in Boston, just before dinner one summer Sunday (after we had had a couple that left me tingling with delight), that the distinguished visitor, in an expansive mood, gave me his confidence. At the risk of incurring displeasure from the Elysian Fields, where he is doubtless at this very moment superintending the preparation of a round for the delectation of those unfortunate ones to whom the Sazarac was unknown during their mortal existence, the method perhaps may now be disclosed.

The secret is in the happy blending of four different bitters. First, a drop of absinthe in a cocktail glass. Roll this around so as to spread it out delicately. Second, a piece of lemon peel rubbed around the edge of the glass and then place the peel in a large bar glass on a few rather large pieces of ice, one or two drops of Angostura, a small coffee spoonful (or maybe a little less) of Pechaud's bitters, a few squirts of simple syrup to soften the harshness of the liquor and a generous dram of Old Bourbon. (Our old Southern families, it will be remembered, were as jealous of the reputation of their Bourbon, aged in the wood in their cellars for years and years, you know, as the connoisseur is proud of his wine cave.) Stir this slowly and thoughtfully with a silver spoon to mix thoroughly all the ingredients, until the ice is reduced about one-half. Strain into the previously prepared cocktail glass and serve. Springtime and the sweet odors of incense breathing morn, twilight and the twittering of birds, frankincense and myrrh and young roebucks—all these and a host of vivid imagery delight the soul. As the old gentleman always remarked on setting down his empty glass, "That's mah drink!"

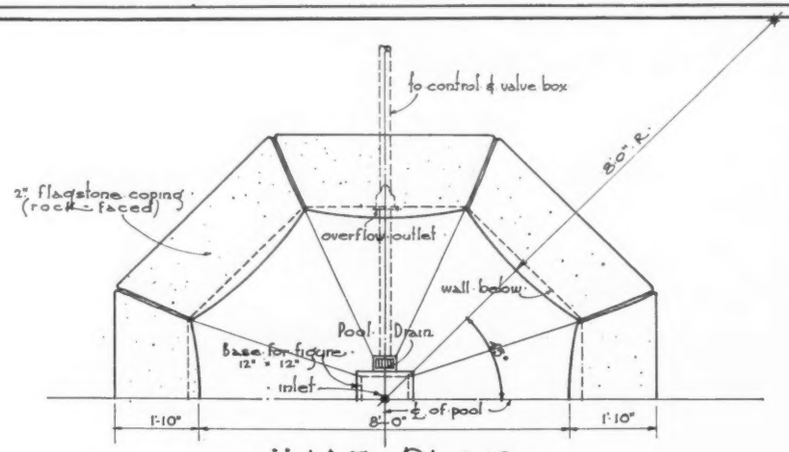
Envoi. The Rum Swizzle deserves to be included in this group as the third leg of the Bacchie tripod that stands before the shrine of Gambrinus. Certain implements are absolutely necessary for its composition. The swizzle stick is practically unknown in these portentous days, although some "Supply" houses carry them. It is a piece of wood, *mes enfants*, about nine or ten inches long and about the diameter of a Corona corona. On one end is a flattish disk, some two or so inches across, carved with blades something like a gyrocopter, or the propeller of an outboard motor. Below the propeller the stem forms a button or acorn to keep the blades from scraping on the bottom. This is held upright and rolled rapidly between the palms of the two hands to agitate the mixture in the container, just as one whips cream. The container should be a glass jar or small pitcher with bulging sides and narrow top to obviate slopping over. The snout of a pitcher is a convenience in serving. The A. and P. carry a smallish jar of marmalade, that, when its original content is emptied, makes an ideal size for a round of four. A young friend of mine named Dick, a most lovable chap, quick of observation and with a delightful faculty in experimentation, brought back this recipe from the Dry Tortugas. He has also invented a swizzle stick that is a distinct contribution to the paraphernalia for mixing drinks. Cut off the stem of a birch sapling the proper size and length, leaving the little branches on the lower end, an inch and a half or so long, peel off the bark and set it away for a while to dry, and there you are.

Rum Swizzle. As for the swizzle itself, put one drop of Angostura together with a jigger of rum and a jigger of Vermouth for each portion, in the container, fill the container about two-thirds full of finely cracked ice, and swizzle until the ice is all dissolved. If the rum is strong and dry, use Italian Vermouth, if the rum is sweet, French Vermouth. This is a very pretty process to watch, and induces a pleasurable relaxation among the spectators, even before partaking.

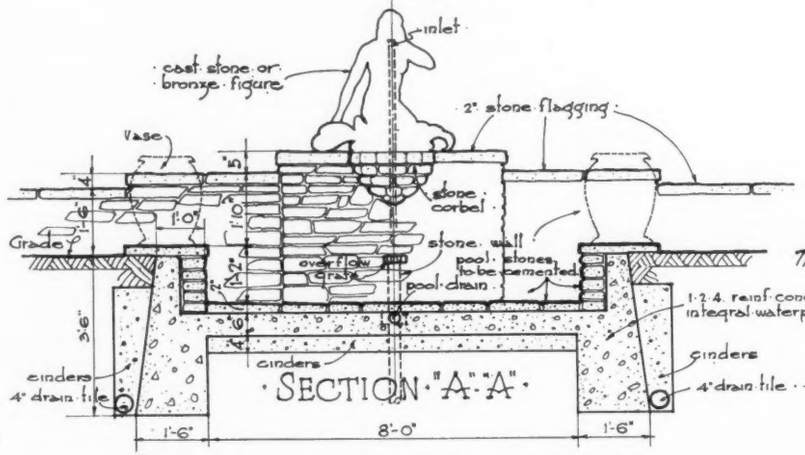

GRAVEL WALK
soil pocket
Note: wall & steps to be laid "dry"—of natural or rough-dressed stone with liberal planting pockets.
Loam joints
cinder footing
ISOMETRIC DETAIL OF CIRCULAR GARDEN STEPS
Loam joints
cement joints
5½" Risers—¼" pitch
flagstone treads with rock-faced edges
Note: wall laid-up "dry" with field or ledge stone, cement used only in steps and in wall at junction with steps joints raked to a depth of 2 inches
PLAN
SECTION ON ℄
concrete
cinders
4" drain tile
SCALE
DETAIL OF GARDEN STEPS AND WALL
flagstone coping
stone walk
Grade slopes
Down 4 Risers
flagstone treads
flagstone cheek
PLAN
stone cheek set in stone pier
cement joints
wire mesh reinf.
pier footing
SECTION
ELEVATION
DETAIL OF GARDEN STEPS IN A SLOPING GRADE
Note: All wall stone to be bedded in cement mortar with face joints left open
wall below
PLAN
Batter wall 1½" to 1'-0"
flagstone seat
ELEVATION
SECTION
DETAIL OF GARDEN SEAT & WALL
OAK SEAT 2" × 17" × 4'-3"
anchor pin
PLAN
cut stone cap
2" wood seat
field stone cement joints
concrete ftg.
ELEVATION
DETAIL OF WOOD & STONE GARDEN SEAT
GARDEN DETAILS OF STONE
WILLIAM PITKIN JR. & SEWARD H. MOTT
LANDSCAPE ARCHITECTS CLEVELAND O.
SCALE



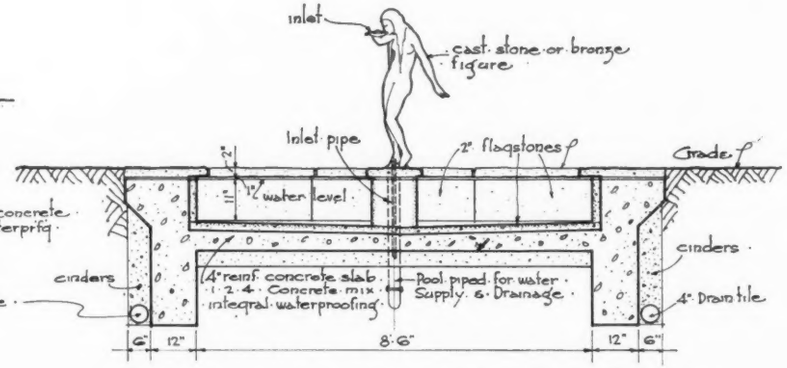
· PLAN ·



· HALF · PLAN ·



· DETAIL · OF · A · WALL · POOL ·



· DETAIL · OF · A · TERRACE · POOL ·

· GARDEN · DETAILS · OF · STONE ·

· WILLIAM · PITKIN · JR · & · SEWARD · H · MOTT ·
· LANDSCAPE · ARCHITECTS · CLEVELAND · O ·

· SCALE ·
0 1 2 3 4 5 6

Why Not Broadcast the Architect's Story?

By Eugene Clute

Interest in building and remodeling can be greatly stimulated through broadcasts by architects from the local radio stations in their communities, and at the same time a more just appreciation of the value of the services the architectural profession has to offer can be developed. It is easy; it costs nothing and it can do untold good.

Architects here and there have been giving radio talks from time to time, but the number of these talks might well be increased a hundred fold and more. Every part of this country should be covered frequently with broadcasts by architects. The radio is used extensively by just about every other important factor in modern life: religion, medicine, law, and even the White House. It seems to be high time for architecture to go on the air in a big way, not so much through broadcasts on the great networks, though they are important, as through countless broadcasts from local stations. Architects nearly everywhere can talk to the people living within a radius of a hundred miles or so. Such broadcasts, coming from their own professional men and suited to the local needs, can have a peculiar value for the people and an intimacy and effectiveness that talks coming over the networks from metropolitan centers can never have.

Most architects will probably agree in principle with what has been said above, but when it comes to stepping up to the "mike" themselves, that is different. Modesty has something to do with this reluctance, but it seems to be hardly a virtue when it deters an architect from doing what he can to increase activity in the building industry, putting more men to work and helping along the general business recovery, while he is advancing the interests of his profession.

Much of this reluctance is due to unfamiliarity with the details of broadcasting and a consequent exaggeration of its difficulties, a tendency to shy at the microphone. Of course, broadcasting does focus public attention upon one more than any other thing, perhaps, excepting getting on the front page of the newspapers. There is this difference, however—that broadcasting brings favorable attention, if one does it well. Probably the fear that they may not do well is what prevents most people from attempting it. Usually this fear is groundless. If one passes the simple voice test given in advance at the broadcasting station, there is nothing to fear. There seems to be no reason why most architects should not qualify. It is much easier than addressing an audience. No effort is needed to make oneself heard, the apparatus takes care of that and the engineer in charge can do wonders in getting the best results out of the speaker's voice through the adjustments he can make.

The first step is for the architect to write to the manager of a broadcasting station in his locality. If there is no station in his own town or city, there is likely to be one in the nearest large center. In writing, the architect should offer to give a talk on home building, remodeling or some other topic of general interest upon which his professional experience fits him to speak. He should state that he appreciates the importance of not giving a technical talk to a popular audience and that he will endeavor to present information of practical value to the average radio listener. The number of architects and students who would appreciate a learned discourse is very small in proportion to the others in the area covered by any station and radio must, in fairness to its public and itself, present programs of general interest. This fits in perfectly with the purpose of the architect in broadcasting, for he wishes, naturally, to talk to the laymen of the community, rather than to the members of his own profession.

Such an offer is likely to be welcomed by the radio station and a date set for the broadcast. A voice test or audition is usually required, but this is not so formidable as its sounds. One is merely asked to read into a microphone for about five minutes while a radio engineer listens at a loud speaker. The apparatus operates just the same as it does in a broadcast, excepting that the talk does not go on the air. This enables the director to judge whether or not one's voice is suitable for radio broadcasting, and to make helpful suggestions. Some otherwise perfectly good voices do not work well on the radio, but the chance of this is small and it can do one no harm to find out.

In order to do as well as possible in the audition one should select a magazine article to read from that is more or less of the character of the talk one expects to give and should read the chosen portion of this article aloud at home often enough so as to know it almost by heart. This prevents stumbling when one comes to read before the microphone and leaves one free to put the requisite degree of expression into the reading.

It should be read as though one were talking to someone at a distance of four or five feet, in a natural conversational tone. To read as though making a public speech is the worst possible approach. It should sound like a talk, not like reading, and thorough familiarity with the text is essential to this end. The rate at which one should read depends largely upon one's usual manner of speaking and ranges from, say, 115 words a minute to 130 words a minute or more. If one naturally talks rapidly and can speak distinctly at a fast clip, the interest of the listener is more likely to be held than if the talk seems to drag. The radio has a tendency to make the voice sound slightly deeper than it really is and this effect should not be accentuated by adopting an especially low tone. The tone of voice should be natural, not only for the best effect but for ease and comfort since the reading must be continuous for 12½ to 12¾ minutes, if the period of the program is 15 minutes. The fifteen-minute period is probably best suited to the purpose of an architectural talk.

One should not talk directly into the microphone, but should place it at one side instead of directly in front, and turned so that the voice strikes it at an angle. The distance varies greatly in different cases. The determined distance should be maintained fairly well, unless the microphone is of the new dynamic type, which is highly

sensitive and allows a great deal of latitude. Usually, if one leans forward the voice is likely to go past the microphone instead of into it and to become indistinct. If one leans back and the distance becomes too great the voice will have a hollow sound that radio people call "roomy."

The microphone has a curious way of picking up the sound of one's breathing, which, of course, does not contribute to the pleasure of the listeners. If the speaker becomes short of breath they can hear him pant in Pittsburgh and points west, or east. Reading too fast; not pausing properly at the commas, semicolons, and periods; and nervousness are the common causes of audible breathing. Usually it is nervousness.

While the manner should be natural and conversational, the tone should be held and there should be enough up-and-down to prevent monotony. Attention should be centered upon expressing one's thoughts and this cannot be done unless the text has been practically memorized. While there is considerable detail about all of this, there is nothing difficult. There need be no fear of wandering in one's speech, for one reads when broadcasting, just as in an audition.

All that has been said above about taking the test applies to broadcasting. No one without experience in talking on the radio should go on the air without a rehearsal at the radio station, in addition to the voice test, using the manuscript of the talk that is to be broadcast. This is important in overcoming nervousness and becoming familiar with the studio routine. Also, it permits the radio people to time the reading and advise the speaker how much needs to be added to or cut from his "script" to make the talk fit the allotted time. The rehearsal affords an opportunity for valuable coaching of the speaker in the art of broadcasting, so that his performance may be creditable both to himself and the broadcasting station.

When possible, the rehearsal should take place immediately before the broadcast, as it tunes the speaker up for the actual delivery of his talk. If the studio is available a half hour before the broadcast, this can be done very well and a few minutes relaxation can be enjoyed before going on. This is not always practicable, however, and the rehearsal must be held at some other time. If the thought of the listeners makes the speaker nervous, as it often does, he should make believe that he is speaking only to the engineer in the control room.

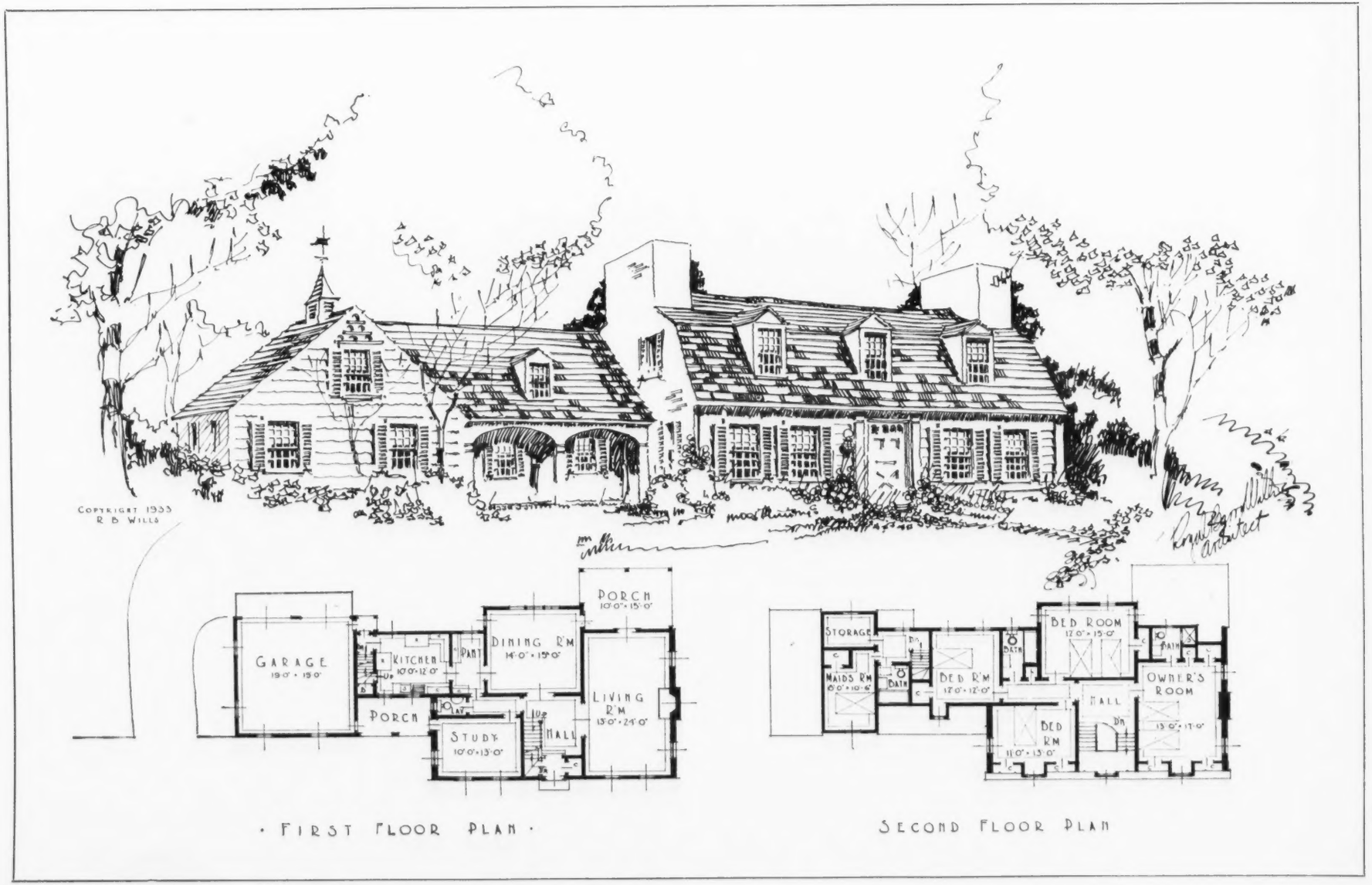
Besides the speaker, the people taking part in the broadcasting of a talk such as an architect gives are usually as follows: a production man, in charge of the program; an engineer, stationed at the apparatus in the control room adjoining the studio; an announcer, who introduces the speaker and makes the closing announcement; and a pianist, who fills in with a little music at the end, making an agreeable closing.

Shortly before time for the broadcast to go on, everyone takes his or her place; the speaker seated at a table, on which is a microphone; the announcer, standing in the center of the studio at a microphone that is either supported upon a floor standard or hung by guy ropes from the ceiling; the pianist at her instrument; and the engineer in the control room. When only a few minutes remain before time to go on, the large loud speaker on the wall begins giving forth the end of the program that is preceding one upon the air. The closing sentences of the talk or the last strains of music are heard and the closing announcement. The long, red second hand, that sweeps around the face of the big studio clock once every minute, swings upward and just as it reaches the dot over the XII the announcer begins. Radio works on split seconds. As soon as the announcer finishes the introduction, the speaker should begin, waiting only long enough not to seem to tumble over him. Then it is a steady grind for 12½ to 12¾ minutes, doing one's level best, slowing down a little on the last paragraph or so and dropping one's voice a little towards the end of the last sentence, so as not to stop with a jolt. Then the announcer and the pianist do their stuff and the broadcast is over, just on the dot.

Many are deterred from talking on the radio by a fear that they cannot write a suitable talk. This is not difficult, if the architect will only write the things he wants to say as though he were giving advice to a client in his office. A natural conversational style is best, there should be nothing savoring of a public speech about it. The "script" should be read aloud to discover any awkward spots, for some combinations of words that are perfectly good when read silently are unpleasant sounding or cause one to stumble in reading aloud. The necessary revisions for ease should be made. The manuscript should be typewritten on opaque white paper with a double space between lines, so that it may be read without difficulty. The sheets should not be fastened together, but left loose so that each sheet may be laid aside as it is read without any crackling or rustling sound that might be picked up by the microphone. About 1760 words will be required, it is easier to cut than to add to a script. There should be two carbon copies of the script which should be turned in at the radio station, preferably a week in advance of the talk. The original manuscript should be retained by the architect to read from in broadcasting.

If the architect's talk is to do the greatest amount of good the largest possible number of people should know about it in advance, so that they may tune in. In addition to the announcement that will be printed, as a matter of course, in the lists of radio programs for the day in the newspapers, notices should be sent out to boards of trade, civic organizations, women's clubs, and to real estate developers and others who are likely to be especially interested. It is well, also, to send copies of a short advance item to the newspapers and to have another item appear after the broadcast. This puts architecture in the minds of the people.

Proper cooperation with the people at the broadcasting station is only fair. If an architect is given an apportunity to broadcast a talk, he is in duty bound to prepare a good talk and deliver it well and without failure, at the appointed time. Postponement is not to be thought of; it would cause the station great inconvenience and, perhaps, a serious loss. The radio people should not be left in doubt whether or not the speaker may be relied upon. It is important to be on hand at the studio as long in advance of the broadcast as the station management may desire, usually from fifteen minutes to a half hour. While radio is an amusement to the general public, it is a serious business to those who put it on the air. An appreciation of the importance of the time element and of the complexity of the system in broadcasting is due the people who contribute their facilities. Radio station people are delightful and an atmosphere of friendly courtesy prevails throughout the offices and studios. It is a pleasant, interesting experience and it is worth while, so why not broadcast?



A RESIDENCE BY ROYAL BARRY WILLS, ARCHITECT

Here and There and This and That

The Producers' Council Meeting
Chicago, June 26, 27, and 28, 1933

We departed from *HERE* with a group of members of The Producers' Council bound for Chicago. *THERE* we were among those present at the Tenth Annual, or as we would enjoy calling it, "the Century of Progress Meeting" of The Producers' Council. It is of great assistance in our work to know what men like F. P. Byington, Johns Manville Corp.; J. C. Bebb, Otis Elevator Co.; F. R. Gilpatric, The Stanley Works; and A. B. Tibbets, National Lead Company, are doing and thinking. We received special instruction at "The House of Magic" in the Fair Grounds as the guest of J. J. Matson, General Electric Company. Before and after the Construction Industry Banquet held at the Blackstone Hotel, presided over by Robert D. Kohn, F.A.I.A., Chairman of the Construction League, many architects, friends of PENCIL POINTS, bade us welcome to the city which is celebrating its one hundredth anniversary of Progress.

Reunions with I. K. Pond, Henry K. Holsman, George C. Nimmons, Richard E. Schmidt, William Jones Smith, Clarence Farrier, and C. Herrick Hammond added pleasure to the evening.

Eugene H. Klaber, President of the Chicago Chapter, A.I.A., made the address of welcome to The Producers' Council Meeting when it opened at the Architects' Club of Chicago.

To Members of the
Architectural Profession

The Treasury Department calls on private architects and engineers throughout the country to participate in the large Federal building program! We quote from a letter from L. W. Robert, Jr., Assistant Secretary of the Treasury:

"In order to spread employment as much as possible during the present emergency, it is the purpose of the Treasury Department to engage outside architects to prepare plans and specifications for buildings coming under its jurisdiction.

"So that the Treasury Department may be informed as to the professional ability of firms or individuals to furnish these services the Department is sending out the enclosed questionnaire to the members of the profession. The American Institute of Architects is cooperating in this general procedure.

"If you desire that your name be placed on file, it is requested that you fill out the questionnaire at once and return it to this Department. This should be done even though you may be well known to the Department and even though you have an application already on file. It is requested that where the business of your office is under the direction of a firm, each member of the firm fill out a similar statement.

"Selection is generally made from architects maintaining an office in the city in which the building is to be constructed, and in some cases it has been found advisable to make it a condition that they associate with architects of wide experience in monumental buildings. This has prompted inclusion of Item No. 9 in the questionnaire. Any information you furnish will be held in confidence."

If you have not received your prequalification form, a "questionnaire" which should be filled in and returned to Room 171—Office of the Supervising Architect, The Treasury Department, Washington, D. C., write at once to Mr. Robert. He asks your prompt cooperation.

Joseph Urban
1872—1933

It is with deep regret we record the death of Joseph Urban, architect, artist and scenic designer, which took place on July 11th in New York. He was a genial man, large in avoirdupois and in the number of his accomplishments. Versatility was more than a habit with him; it was a consciously desired rotation of interests. "Versatility aids fertility; it keeps the gray matter in working condition," said Urban, and proceeded to design everything from trunks and motor cars to silks.

Urban was the holder of many medals in Austria, before he first came to this country in 1901, engaged to decorate several pavilions for the Saint Louis Exposition. Upon his return to Vienna he worked as an illustrator, although yearning to practice architecture. His desire was realized when he received the Vienna town hall commission.

The Boston Opera Company engaged Urban as art director in 1911, after which began his association with the late Flo Ziegfeld. Most of us are familiar with his richly-colored stage designs which served as a background for the beauties—and the beasts—of Ziegfeld Follies. The color scheme of the Century of Progress Exposition in Chicago was his last big commission. He died without seeing the completed work.

We are told that he always called his draftsmen and the scene painters working under him, "My Children," and with his penciled criticisms of their work he frequently added the admonition: "Love your papa." Mr. Urban is survived by his wife, the former Mary Porter Beegle, who has been arduously working as a member of the Women's Committee of the New York Architects' Emergency Unemployment Committee.

Comparative Details
Omitted This Month

The comparative details which have been running since last October have proven a popular and useful feature of PENCIL POINTS. Henceforth until further notice they will be run in alternate issues. The principal reason for this decision is that in issues containing *The Monograph Series* there is less space to devote to the other regular PENCIL POINTS features and, furthermore, in the *Monographs* themselves there are provided some good construction details. This month we have included also two plates of garden details by Pitkin & Mott of Cleveland, so that we do not feel that the construction detail side of our activities has been unduly slighted.

The subject of the next set of comparative details, which will appear in September, is *Exterior Steps*. For November the subject will be *Eaves and Gutters*.

Paris Prize Drawings

In order to present adequately the winning designs in this year's Paris Prize Competition more pages will be required than are available this month for the purpose. We will therefore reproduce the Paris Prize drawings in the September issue and will include an account by Lloyd Morgan, who coached the winners of the first three places, of the progress of the competition and its salient features.

The Princeton Prizes in Architecture

William R. James, Jr., of Winston-Salem, North Carolina, and Wilfred J. Pucke of Cincinnati, Ohio, were the winners of the Princeton Prizes for the year 1933-34. A ten-day competition in architectural design was held from May 20th and 31st. From over one hundred and twenty-five applicants, about eighty were selected on their records for admission to the competition. Of this number fifty submitted drawings.

The Jury met June 14th, 1933. The architectural profession was represented by Mr. William Pope Barney of Philadelphia, Messrs. George A. Licht, Stephen F. Voorhees, and Henry Wright of New York, with Professor Jean Labatut and Sherley W. Morgan of the Staff of the School.

In awarding the first prize ($800) to Mr. James the Jury felt he handled all the problems of the Program for "An Amusement and Shopping Center" in a more satisfactory manner than any other competitor. His group had the character of a community center, his elements were well related and in good scale. His design solved the difficult question of parking in a most satisfactory arrangement. In addition to his excellent plan, the Jury thought his Sports building unusually fine in elevation.

Mr. James and Mr. Pucke will be enabled to spend the next academic year in advance study at Princeton School of Architecture. They are entitled to residence at the Graduate College and exempt from tuition fees. Mr. John L. R. Grand was appointed "First Alternate," Mr. William N. Manning, "Second Alternate," and Mr. Frederick Liebman was given "Honorable Mention."

"Figures and Finance for the Architect"

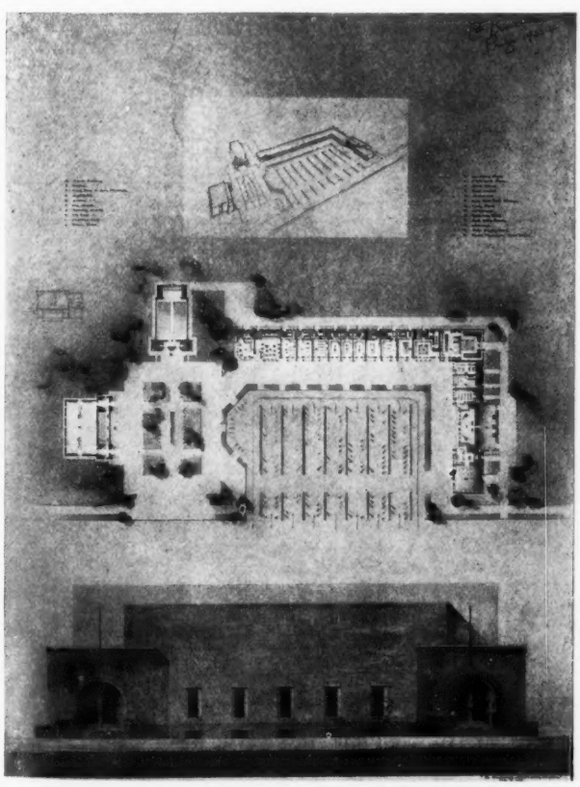
The series of discussions under this heading by Robert Lee Henry, C.P.A., L.L.B., which began in the May issue of PENCIL POINTS, will be continued in our September issue. Mr. Henry is an authority on the financial phase of the architect's work. He will be glad to answer all questions where a Certified Public Accountant can be of assistance. Our readers should feel free to consult with Mr. Henry. His services are gratuitous. Letters directed to Mr. R. L. Henry, PENCIL POINTS, 330 West 42nd Street, New York, N. Y., will receive prompt reply.

Albert Leverett Brockway, F.A.I.A. 1865—1933

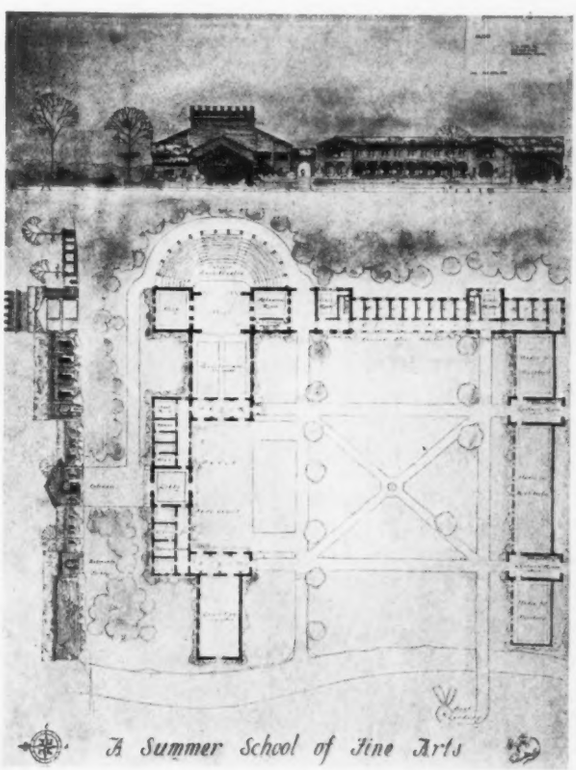
The untimely death of Mr. Brockway in Syracuse, N. Y., on June 25th, is a great loss to the architectural profession. He was a Director and Executive Vice President of The American Institute of Architects and a member of the New York State Board of Examiners for registration of architects. He was appointed when the registration law was passed in 1915 and served continuously until his death.

Mr. Brockway was a native of Utica, N. Y. He graduated from Brooklyn Polytechnic Institute in 1883 and later studied in Paris. In 1890, upon his return to New York, he worked in the offices of Babb, Cook & Willard and of Richard M. Hunt, and in 1891 formed a partnership with John P. Benson and Ernest Flagg. Without discontinuing active practice Mr. Brockway became Professor of Architecture at Syracuse University in 1893. He commuted from New York to Syracuse each week until 1902 when he moved to Syracuse.

Those of us who knew Mr. Brockway and had the good fortune to profit by his advice and council feel his death deeply.



PRIZE WINNING DESIGN FOR AN "AMUSEMENT AND SHOPPING CENTER"
By William R. James, Jr.
COMPETITION FOR THE PRINCETON PRIZE IN ARCHITECTURE, 1933-34



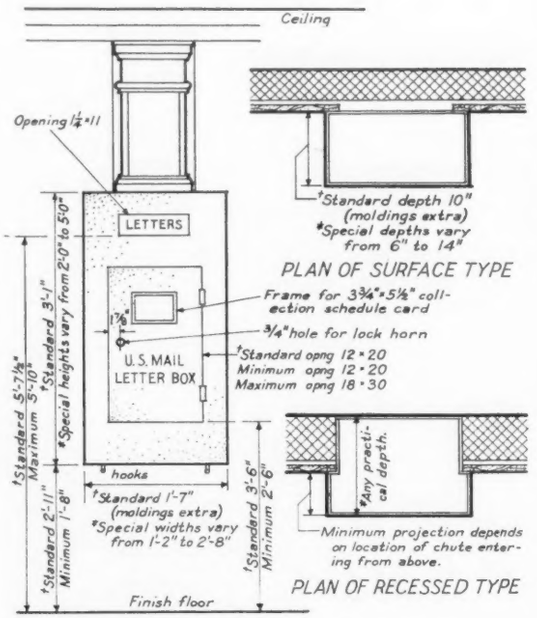
PRIZE WINNING DESIGN FOR A "SUMMER SCHOOL OF FINE ARTS"
By Frederick W. Bucky, Jr.
COMPETITION FOR THE NEW YORK UNIVERSITY PRIZE IN ARCHITECTURE, 1933-34

DRAFTSMAN'S DATA SHEETS

MAIL CHUTE RECEIVING BOX

Prepared by Don Graf, B.S., M.Arch.

Sheet No. **F13c** PENCIL POINTS Aug. 1933


Ceiling
Opening 1/4 • 11
LETTERS
†Standard depth 10" (moldings extra)
*Special depths vary from 6" to 14"
PLAN OF SURFACE TYPE
Frame for 3¾"•5½" collection schedule card
¾" hole for lock horn
†Standard opng 12 • 20
Minimum opng 12 • 20
Maximum opng 18 • 30
U. S. MAIL LETTER BOX
†Standard 5'-7½" Maximum 5'-10"
†Standard 3'-1" *Special heights vary from 2'-0" to 5'-0"
†Standard 2'-11" Minimum 1'-8"
hooks
†Standard 1'-7" (moldings extra)
*Special widths vary from 1'-2" to 2'-8"
†Standard 3'-6" Minimum 2'-6"
*Any practical depth.
Minimum projection depends on location of chute entering from above.
PLAN OF RECESSED TYPE
Finish floor

† No official standard size for receiving boxes exists. The sizes given as "standard" are unofficially regarded as such because of wide usage, and are acceptable to the Post Office Department for average height buildings.

* The cubic contents of "special" receiving boxes must be approved by the Postmaster. A general rule is to allow 1 cubic inch of box to 10 square feet of rentable floor space.

The amended Postal Laws, Section 943, as of March 1, 1933, provide as follows: Receiving boxes shall be provided with doors opening to the right upon exposed side hinges. Boxes shall be provided with letter slot protected by inside hinged flap legibly inscribed LETTERS. Box shall be distinctly marked U. S. MAIL LETTER BOX. The box shall be provided with suitable means of attaching satchel or other receptacle in position for making collections.

Data supplied by Cutler Mail Chute Co.

THE DRAFTSMAN'S NOTEBOOK

Four *Data Sheets* appear each month, giving information on constantly recurring questions which arise at the drafting board. The convenient size and succinct method of presentation make the collection a quick finger-tip reference. The loose-leaf feature enables you to add your own notes and keep the notebook always up to the minute. Comment and criticism is always welcome. Write Don Graf, PENCIL POINTS, 330 West 42nd St., New York.

Twice yearly the 24 *Data Sheets* which have appeared in the preceding six months will be reprinted on bond paper, punched ready for filing in a standard six-ring loose-leaf binder. Three sets are now available at 75 cents per set.

ANSWERS TO CORRESPONDENTS

R. E. J., Providence.—Flashing and Beams are coming eventually. The check list is a good idea, if you have any dope send it in.

J. M. C., Ozone Park.—See paragraph above, Jimmie. Thanks for the puff.

L. J. W., Belleville.—And thanks to you. May the D. S. continue their usefulness.

E. L. S., Milwaukee.—How's things by you, Kukum?

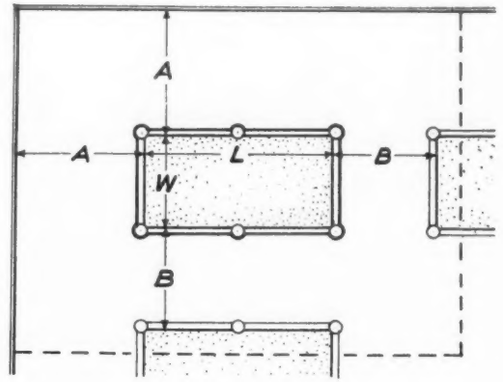
This month ye olde compiler of these here now *Data Sheets* got fooled as he frequently does. It was planned to give the "Standard Wiring Symbols" this month but the A.I.A. crossed the plan up thusly—"We are putting your

DRAFTSMAN'S DATA SHEETS

BILLIARD ROOMS

Prepared by Don Graf, B.S., M.Arch.

Sheet No. **D2c** PENCIL POINTS Aug. 1933



Size W x L	Where Used	Unobstructed Space A	Between Tables B
3x6	Home	4'-6"	- - - -
3½x7	Home	5'-0"	- - - -
4x8	Home Commercial standard in South America, Mexico, and Spain	5'-6"	4'-6"
4½x9	Popular U. S. commercial standard	6'-0"	5'-0"
5x10	U. S. professional standard	6'-0"	5'-0"
6x12	Commercial standard in Canada and England	6'-0"	5'-0"

Approved by Brunswick Balke Collender Company

DRAFTSMAN'S DATA SHEETS

SECANTS 45° TO 90° COSECANTS 0° TO 45°

Prepared by Don Graf, B.S., M.Arch.

Sheet No. **C1i** PENCIL POINTS Aug. 1933

COSEC		60′	50′	40′	30′	20′	10′	0′
	SEC	0′	10′	20′	30′	40′	50′	60′
44°	45°	1.4142	1.4184	1.4225	1.4267	1.4310	1.4352	1.4396
43	46	1.4396	1.4439	1.4483	1.4527	1.4572	1.4617	1.4663
42	47	1.4663	1.4709	1.4755	1.4802	1.4849	1.4897	1.4945
41	48	1.4945	1.4993	1.5042	1.5092	1.5142	1.5192	1.5243
40	49	1.5243	1.5294	1.5346	1.5398	1.5450	1.5504	1.5557
39	50	1.5557	1.5611	1.5666	1.5721	1.5777	1.5833	1.5890
38	51	1.5890	1.5948	1.6005	1.6064	1.6123	1.6183	1.6243
37	52	1.6243	1.6304	1.6365	1.6427	1.6489	1.6553	1.6616
36	53	1.6616	1.6681	1.6746	1.6812	1.6878	1.6945	1.7013
35	54	1.7013	1.7082	1.7151	1.7221	1.7291	1.7362	1.7435
34	55	1.7435	1.7507	1.7581	1.7655	1.7730	1.7806	1.7883
33	56	1.7883	1.7960	1.8039	1.8118	1.8198	1.8279	1.8361
32	57	1.8361	1.8444	1.8527	1.8612	1.8697	1.8783	1.8871
31	58	1.8871	1.8959	1.9049	1.9139	1.9230	1.9323	1.9416
30	59	1.9416	1.9511	1.9606	1.9703	1.9801	1.9900	2.0000
29	60	2.0000	2.0101	2.0204	2.0308	2.0413	2.3519	2.0627
28	61	2.0627	2.0736	2.0846	2.0957	2.1070	2.1185	2.1301
27	62	2.1301	2.1418	2.1537	2.1657	2.1779	2.1902	2.2027
26	63	2.2027	2.2154	2.2282	2.2412	2.2543	2.2677	2.2812
25	64	2.2812	2.2949	2.3088	2.3228	2.3371	2.3515	2.3662
24	65	2.3662	2.3811	2.3961	2.4114	2.4269	2.4426	2.4586
23	66	2.4586	2.4748	2.4912	2.5078	2.5247	2.5419	2.5593
22	67	2.5593	2.5770	2.5949	2.6131	2.6316	2.6504	2.6695
21	68	2.6695	2.6888	2.7085	2.7285	2.7488	2.7695	2.7904
20	69	2.7904	2.8118	2.8334	2.8555	2.8779	2.9006	2.9238
19	70	2.9238	2.9474	2.9714	2.9957	3.0206	3.0458	3.0716
18	71	3.0716	3.0977	3.1244	3.1516	3.1792	3.2074	3.2361
17	72	3.2361	3.2653	3.2951	3.3255	3.3565	3.3881	3.4203
16	73	3.4203	3.4532	3.4867	3.5209	3.5559	3.5915	3.6280
15	74	3.6280	3.6652	3.7032	3.7420	3.7817	3.8222	3.8637
14	75	3.8637	3.9061	3.9495	3.9939	4.0394	4.0859	4.1336
13	76	4.1336	4.1824	4.2324	4.2837	4.3362	4.3901	4.4454
12	77	4.4454	4.5022	4.5604	4.6202	4.6817	4.7448	4.8097
11	78	4.8097	4.8765	4.9452	5.0159	5.0886	5.1636	5.2408
10	79	5.2408	5.3205	5.4026	5.4874	5.5749	5.6653	5.7588
9	80	5.7588	5.8554	5.9554	6.0589	6.1661	6.2772	6.3925
8	81	6.3925	6.5121	6.6363	6.7655	6.8998	7.0396	7.1853
7	82	7.1853	7.3372	7.4957	7.6613	7.8344	8.0157	8.2055
6	83	8.2055	8.4047	8.6138	8.8337	9.0652	9.3092	9.5668
5	84	9.5668	9.8391	10.128	10.433	10.759	11.105	11.474
4	85	11.474	11.868	12.291	12.746	13.235	13.763	14.336
3	86	14.336	14.958	15.637	16.380	17.198	18.103	19.107
2	87	19.107	20.230	21.494	22.926	24.562	26.451	28.654
1	88	28.654	31.258	34.382	38.202	42.976	49.114	57.299
0	89	57.299	68.757	85.946	114.59	171.89	343.78	inf.

request for permission down for consideration at the Executive meeting in November." So all you fans who have asked for this sheet will have to make up your own (much to the annoyance of the electric contractor) until permission is obtained from the A.I.A.

Also the Dimensions of 1933 Automobiles have not been tracked down as yet. Apparently they are very little different from last year's.

DATA SHEET NO. F13c. *Here is another scoop for the* dayta *sheets. The intimate secrets of mail box dimensions are now revealed for the first time in history, brought up to date with the latest government rules. Other mail chute sheets will follow.*

DATA SHEET NO. D2c. *Many rooms have been marked "Billiard Room" on the plans although scarcely big enough for tiddle-dy-winks or mah-jong. More space than the minimums given above should be allowed if possible.*

DATA SHEET NO. C1i. *This sheet completes the series of six which give the trigonometric functions. For light summer reading try the table of Secants from 45 to 90 degrees. Good for insomnia.*

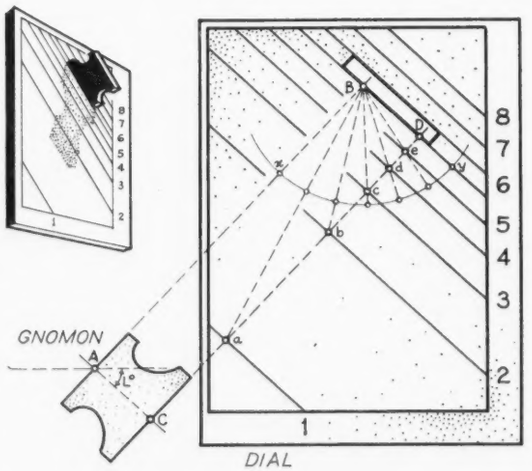
DATA SHEET NO. F12d. *Every so often someone breaks into print with instructions on the construction of sundials, but they never consider that the gnomon has thickness. And a gnomon of no thickness would have a terrific time trying to cast a shadow, eh what?*

DRAFTSMAN'S DATA SHEETS

WEST VERTICAL SUNDIAL

Prepared by Don Graf, B.S., M.Arch.

Sheet No. **F12d** PENCIL POINTS Aug. 1933



Through a convenient point *A* draw the line *AC* making an angle *L*° with the horizontal which is equal to the latitude of the place. The distance *AC* is the height of the gnomon, which may be of any desired design so long as the top and bottom edges remain as parallel planes.

Draw parallel lines *AB* and *CD* at right angles to *AC*, making *BD* parallel to *AC*. Draw a line parallel to *BD* at a distance from it equal to the thickness of the gnomon. These two lines are the six o'clock marks on the dial, and locate the position of the gnomon.

From point *B* describe a quadrant of convenient radius as *xy*. Divide the quadrant into six equal parts of 15° each. From point *B* draw lines to the five division marks until they intersect line *CD*. Lines drawn parallel to *BD* through points *a*, *b*, *c*, *d*, and *e*, thus found, on *CD*, are the 1 to 5 o'clock dial marks.

If it is desirable to show half or quarter hour marks the quadrant is divided into 12 or 24 equal parts, these intermediate dial marks then being found in the same manner as the hours. Five- or one-minute divisions can then be made accurately enough on the dial face by eye.

The 8 and 7 o'clock marks are symmetrical about the gnomon with the 4 and 5 o'clock marks. The dial plate must be set exactly vertical and facing true west.

Experimental House in Philadelphia

The accompanying illustration shows the main entrance of an experimental house recently erected at Merion, Pennsylvania, from a design by W. Pope Barney, Architect. The Philadelphia and Reading Coal and Iron Company, which sponsored the construction of this house, has issued an invitation to any architects or draftsmen who visit Philadelphia to inspect the house.

The house, which is completely furnished, is said "to take advantage of the best that modern science and art have to offer in constituting comfort and beauty in living without large expenditure. It is not queer outside nor in. It is quiet, simple, and direct, completely devoid of any attempt to be 'modernistic' in its architectural expression." The equipment of the house includes a recently developed apparatus for complete heating and air conditioning and provides hot water all the year round, running ice water in master's bedroom and kitchen during the summer, a domestic refrigerator, and a clothes drier.

Demand for Advanced Training in Architecture.

We hear from Richard P. Raseman, A.I.A. Secretary of The Cranbrook Academy of Art, Bloomfield Hills, Michigan, that a considerable number of applicants for the recently announced Scholarship in the Post Graduate School of Architecture were practicing architects who, having been out of school several years, are taking advantage of these slow times to prepare themselves better for the future. The response to the competition notice published in PENCIL POINTS was most gratifying.

M.I.T. Special Student Scholarships

Unfortunately the photographs of the winning designs in the Massachusetts Institute of Technology Special Student Scholarship Competition arrived too late for inclusion in this issue. The two awards were won by O. L. Colavecchio, a third year student at The Institute, and Carl A. Kloverstrom of Denver, Colorado. Thirty-one drawings were handed in.

Definitions Agreed Upon by Air Conditioning Manufacturers, June 8, 1933

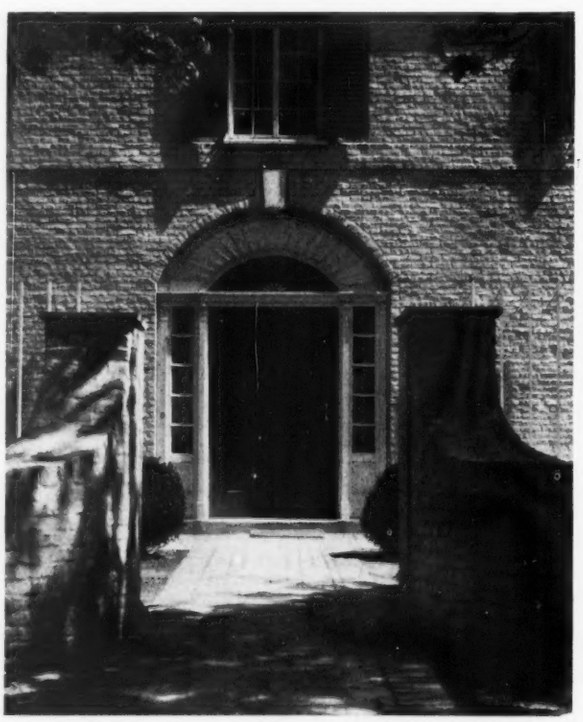
Complete air conditioning equipment is that which provides simultaneous control of temperature, humidity, air motion, and cleaning within an enclosure throughout varying seasons.

Winter air conditioning equipment provides simultaneous control of temperature, humidity, air motion and purification within an enclosure in the winter months.

Summer air conditioning equipment provides for simultaneous control of temperature, humidity, air motion and purification during the summer months.

All of the above functions must be performed to provide related control within the limits set down in the Report of the American Society of Heating & Ventilating Engineers Committee on Ventilating Standards.

No manufacturer, or dealer, shall have the right to use the term "Air Conditioning," "Summer Air Conditioning," or "Winter Conditioning," unless the equipment offered provides the functions outlined above within the standards provided for. For instance, equipment which provides humidification alone must not be described by the term "Air Conditioning." It shall be called humidification equipment or some similar defining term.



ENTRANCE TO "TOMORROW'S HOUSE"
W. POPE BARNEY, ARCHITECT

Graduate Scholarship Competition Award, New York University

We are privileged, through the courtesy of J. Conrad de Graaf, secretary of the Department of Architecture in the New York University, College of Fine Arts, to publish the design submitted by Frederick W. Bucky, Jr., which won the graduate scholarship prize.

The N. Y. U. Competition is open to native graduate students of approved Schools of Architecture and the winner is provided with a sum of money equal to the tuition fee for a year of graduate study in the College of Fine Arts, leading to a degree of Master of Architecture.

The Jury of Award included E. Raymond Bossange, Dean of the College of Fine Arts, N.Y.U.; Joseph Freedlander; Ralph Walker; Will Rice Amon; Lloyd Morgan; and A. C. Schweitzer. The problem was the design of a special Summer School for a College of Fine Arts in the Mountains of Northern New York. Contestants were limited to one week in which to prepare the design.

Six universities were represented among the contestants. An Honor Graduate of the School of Architecture, University of Florida, Mr. Bucky, carried off the honors while Mr. Milton Sherman of Ventnor, New Jersey, received honorable mention and was designated "First Alternate."

Mr. Bucky tells us he preped at Lee High School, Jacksonville, Florida, and after graduation attended University of Pennsylvania, 1928-29. He is a member of Phi Kappa Phi; Gargoyle and Quill and Scroll.

A résumé of the opinion of the Jury states that "In Mr. Bucky's problem it was felt that his plan was decidedly the most suitable for the character of the Program. It was specially commended because of the entrance control and distribution of visitors and students from a central point; the arrangement of the out-door amphitheatre and auditorium; the openness and isolation of the various studios. The character of the elevation was felt to be fitting to the problem."

It was required to present the drawings on one sheet 30 inches by 40 inches, unmounted, and to show the plan, elevation, and section at 1/16-inch scale. The rendering could be in any medium. No preliminary sketch was required.

Modern Air Conditioning, 3

Continued Discussion of Equipment

By Harold L. Alt

In homes having, or which can be equipped with, warm air pipes one manufacturer is offering a complete gas-fired air conditioning unit which may be used as an adjunct to a warm air furnace or to supplement hot water or steam systems. This apparatus, which is illustrated in Figure 14, consists of an air filter, motor driven fan, air washer, and gas-fired steel furnace which warms the air during the winter season. No refrigeration is used in connection with this equipment, the idea being to use the air washer in the summer during the daytime when the air is hot and of comparatively low relative humidity and to run the apparatus without the air washer in service at night when the outside air is cooler than that in the building but more heavily humidified. This arrangement, while giving more comfortable conditions inside of the building, does not claim to dehumidify the air but does claim to accomplish, largely by natural means, a great deal that is necessary to secure more desirable conditions during both summer and winter.

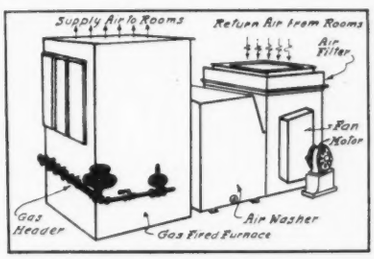


FIGURE 14

A co-ordinated central direct fired unit making use of the counter flow principle has been developed by another manufacturer in which the gases from the burner flow upward through passages surrounding the air ducts through which the air is circulated, transmitting the heat direct to the air by this means. This unit, which is either oil or gas fired, has an air filter, a stainless steel humidifier, a hygrostat to control the humidity, and a thermostat to control the fuel according to needs. In this unit, the fluid fuel (gas or oil) is never closed off entirely, the thermostat simply increasing a small gas flame to a large one when more heat is called for by the thermostat. Air movement is assured by a small motor connected to double fans with backwardly curved blades. This blower unit delivers the air through a system of supply ducts similar to those employed in the ordinary warm air furnace. Positive circulation is developed to permit proper distribution in those houses where the trend toward distinct architectural types often involves widely distributed floor areas.

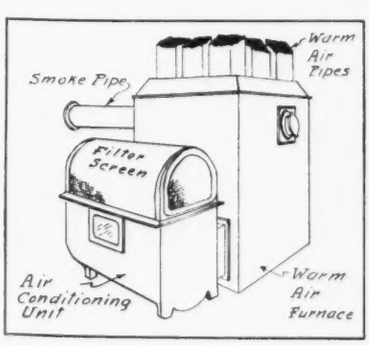


FIGURE 15

Another design of basement equipment, also suitable for warm air furnace installations or used as an accessory in hot water and steam heating, is given in Figure 15. This consists of a large semicylindrical screen filter on the top of the housing through which the air enters, the screen being of fine copper wire mesh. The bottom of the housing consists of a cast iron basin which catches the water from the water sprays.

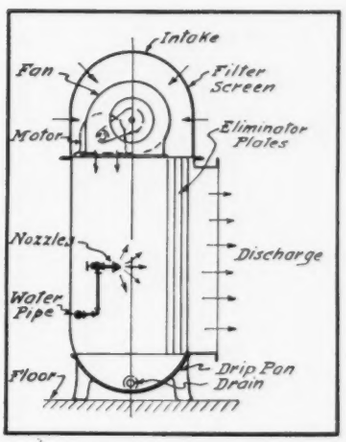


FIGURE 16

The operating fans and motors are located under the filter screen and discharge through a solid partition down into the spray chamber where the air is washed and from which it passes through eliminator plates and out of the discharge into the furnace for heating. Water is sprayed in the spray chamber by nozzles—see cross section of this apparatus shown in Figure 16. In the summer, if cooling is desired, cooling coils may be added with a small refrigeration unit to operate them.

A somewhat similar idea is used by another manufacturer who has developed the design shown in Figure 17 which is primarily for a warm air furnace and will filter the air and deliver it under fan pressure to the furnace in which an automatic humidifier can be located. When equipped with the necessary controls, this equipment will deliver air at any temperature and automatically maintain that temperature; deliver air with automatically controlled humidification; deliver cleaned air; and, in summer, will deliver cool air during the night if an outside air connection is provided. No attempt is made in this apparatus to do cooling either with refrigeration or cold water.

On the device shown in Figure 18 a novel type of filter is used, this being of the cloth bag design. The apparatus here shown is for both heating and cooling and usually has a double heating element, one portion of which is located above the humidifier connection and the other section below the humidifier connection. In summer, cooling water is run through both ele-

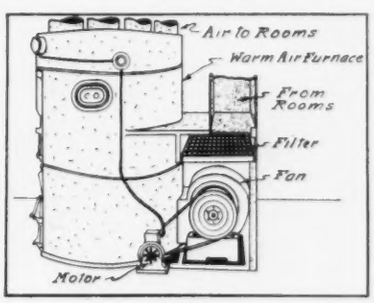


FIGURE 17

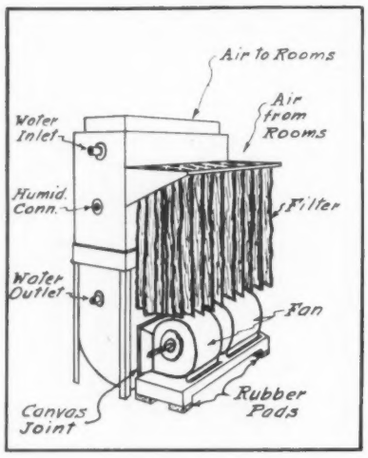


FIGURE 18

ments, either from the street main or from a mechanical refrigeration cooling tank. In the winter, hot water is supplied from a hot water boiler using the same elements. These equipments are also supplied with single cooling and heating elements, if desired, in order to reduce cost, and when so outfitted will do everything that the double element equipment will do except that the cooling in summer is somewhat curtailed by the lesser amount of surface available. Humidity is provided for by spraying water in the space between the two elements; to eliminate noise the bed plate for the fans is mounted on rubber pads with a canvas joint between the fans and the casing for the elements. Figure 18 is shown with the outside casing removed so as to indicate the interior arrangement.

A somewhat different arrangement—but with the same essential elements of filtering, forced air circulation, warming and humidifying—has been used by another manufacturer in the application of oil burning to air conditioning. This is illustrated in Figure 19 where an oil-fired heat exchanger takes the place of the warm air furnace, the air being supplied to the base of the heat exchanger by a power-operated fan which draws its air supply through an air filter located just above the fan. A cooling section may also be installed between the fan and the heat exchanger and ordinarily, when this is done, cold water from the street service is used, but an artificially cooled water circulation with mechanical refrigeration may be employed if desired. This equipment is completely automatic and is controlled from a thermostat, generally located on the first floor, which starts the oil burner whenever the room temperature falls. The building up of heat in the exchanger casing causes a second thermostat to start up the motor on the fan; as soon as temperature conditions are restored in the house the oil flame is reduced and the fan is stopped.

The apparatus shown in Figure 20 takes air from the rooms and also from the outside, utilizing hot water for heating in the winter and refrigerated water, either ice or mechanically cooled, in summer. The air is filtered and humidified or dehumidified, as the case may require, and the boiler may be coal, oil, or gas fired. The same element is used for both heating and cooling, the piping being cross connected as shown in the illustration.

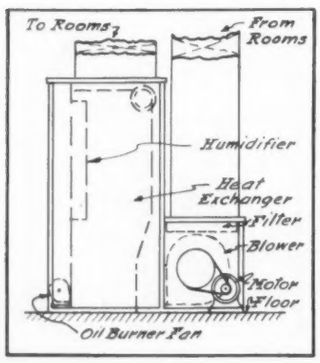


FIGURE 19

Ceiling Air Conditioning Units

Air conditioning units installed on the ceiling are featured by another manufacturer, although these units may be placed at any convenient point and the air piped to the desired locations of outlets. The units consist of a small air washer with the usual water sprays, eliminator plates, and an air circulating fan. This unit does not attempt to supply any heat but, instead, is installed where it can recirculate the air in the room indefinitely, adding humidity by means of rotating the air through the spray in the winter time, and cooling from a refrigeration machine in the summer (see Figure 21). The refrigeration machine may be placed in any spot where it will be out of the way and with the unit on the ceiling so that no valuable floor space is lost on account of air conditioning. Where the appearances of the unit on the ceiling would be objected to, the unit is placed out of sight—usually in the same room with the compressor—and the air is piped through ducts to the register outlets. Of course, return air to the unit must also be similarly piped back with this arrangement.

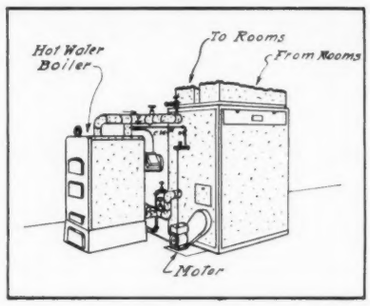


FIGURE 20

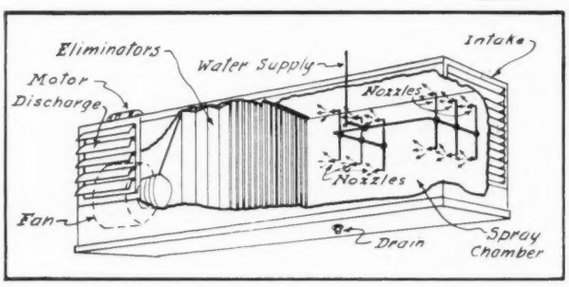


FIGURE 21

A second type of ceiling unit is indicated in Figure 22, this being built along the lines of the well known unit heater. It consists of a motor, propeller fan, extended-fin heating and cooling element, drip pan, and a double louvre arrangement, the vertical louvres being formed by condensate eliminators. This is illustrated in section "A-A" (see Figure 23). The whole is enclosed in a furniture steel cabinet and is supported by a substantial hanger on each side ready for attachment to the ceiling. The horizontal louvres are adjustable so that the air may be directed downward, horizontally, or upward, as desired. During the winter this unit can be used the same as a unit heater when properly supplied with steam and in the summer may be used as a cooler and dehumidifier if attached to a refrigeration plant or supplied with

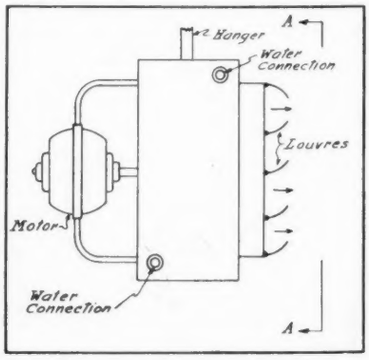


FIGURE 22

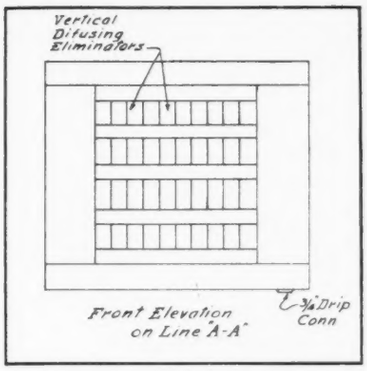


FIGURE 23

well water of sufficiently low temperature.

Floor Standing Units

Floor standing air conditioning units are of two general classes, the industrial and the ornamental. The industrial type is used in shops and commercial buildings such as work rooms, etc., while the ornamental type is specially designed for offices, residences, and similar locations. As an example of the industrial type, the unit shown in Figure 24 may be taken as more or less typical. It consists of a galvanized iron casing, enclosing a heating and cooling element below, and with the fans mounted above the element. At the top 90-degree elbows deliver the air in a horizontal or slightly upward direction, the operating motor for the fans being carried on a bracket at the side where it is readily accessible if necessary. At the lowest point a drip pan is provided for condensation occurring on the cooling element and the space between the motor bracket and the drip pan on the side of the unit is used for the placing of traps, valves, etc. This unit is only 18″ deep and does not attempt to wash or filter the air. It will heat the air when supplied with steam and will cool and dehumidify the air when connected up with a refrigeration machine or well water of sufficiently low temperature.

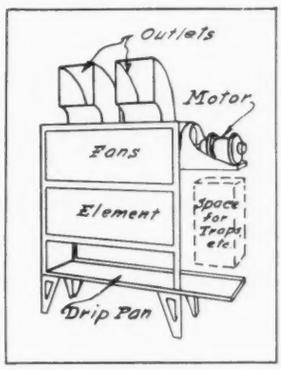


FIGURE 24

An ornamental air conditioning unit involving a quite similar arrangement is shown in Figure 25. It will be seen that the chief differences consist of having the casing cover the drip pan and all pipe connections, and also of having the air discharge upward through a grille in the top of the cabinet. These units vary from 8″ to 18″ in depth, 27″ to 48″ in width and 26″ to 38″ in height,

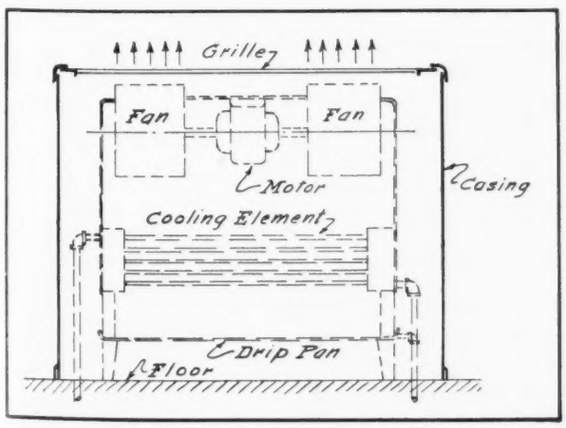


FIGURE 25

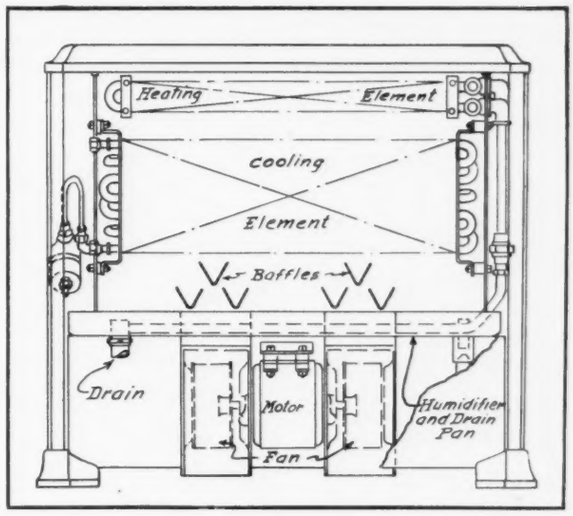


FIGURE 26

according to size required. They are finished ordinarily in natural walnut grain and the cooling and heating element is suitable for circulating either hot water or refrigerated water but not direct expansion refrigerants. This, however, does not necessarily follow in all units of this type although it does for the particular one (Figure 25) selected for illustration.

A floor standing unit involving a different arrangement is shown in Figure 26. It will be noted that in this unit the fans are placed below the elements and that separate heating and cooling elements are used. The fans deliver the air against deflector baffles which distribute the air entirely across the cooling element and the usual drip pan for coil condensation is provided. Where the unit is installed for cooling only, the heating element is omitted. This arrangement has the advantage of permitting the steam and return piping to be coupled up to the heating element and the refrigerant suction and discharge line connected to the cooling element without involving any valved cross connections between the two systems. The heating capacity of the unit may be in use in the morning and the cooling capacity may be in use in the afternoon if the outside or inside conditions justify such a change-over. In this unit the refrigerant is used directly in the cooling coil without the necessity of any cold water circulation.

The unit shown in Figure 27 also has the fans located at the bottom and is arranged for cooling only. The cabinet is specially insulated to prevent sweating on the outside and has eliminator plates which collect the condensation forming on the cooling coil and drain this water to a pan connected to waste. The cooling element is of copper in the ordinary installation and may be supplied with cooled water or refrigerant direct. When water is used it may be cooled by icing or by mechanical refrigeration, or it may be taken direct from a well or the city main. When desired, a heat-

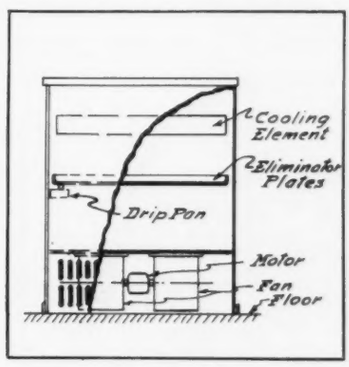


FIGURE 27

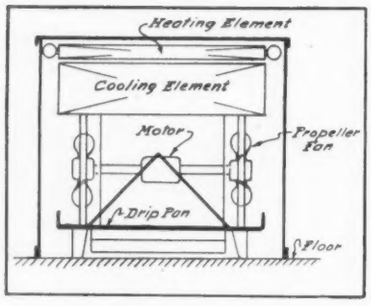


FIGURE 28

ing feature may be added by cross connecting the same cooling surface to the hot water or steam mains with suitable valving so that either may be used.

In Figure 28, a unit with the novelty of propeller fan is shown. Here, the air enters from the side in a horizontal direction, passing through the propeller fan and then changing its direction to vertical as it flows upward along the deflector plates. It then enters the cooling and heating elements from the bottom and passes out into the room through a grille on the top of the cabinet. Separate elements are used for heating and for cooling so that no valves need be operated in transferring from one service to the other. The cooling surface in this unit receives the refrigerant direct and F-12 is used for this purpose on account of its safety. Waste on the cooling water is prevented by means of a solenoid valve on the water which closes whenever the fans are stopped.

Still another manufacturer presents the unit illustrated in Figure 29 which shows how this unit is connected up to the refrigerating machine and the refrigeration piping as well as the electrical circuits for control of the compressor. It will be noted that the arrangement of the unit itself varies very little from that shown in Figure 25, but there is the essential difference that the unit shown in Figure 29 is using the refrigerant directly in the cooling coil, while that shown in Figure 25 requires the circulation of cold water. In the smaller sizes this unit is operated with isobutane as a refrigerant while, in the larger sizes, menthol chloride is used. The unit for an ordinary-sized office or residential room is 39″ long, 34″ high, and 14″ deep, while the compressor installation occupies a space 48″ long, 30″ high, and 24″ deep.

A unit which embodies radical departures in design and which contains a miniature air washer (although of the floor type) is shown in Figure 30. As will be noted, the interior arrangement consists of a fan set in the top part of the unit and blowing downward toward the floor. This fan can take its suction either from the top of the unit, or from the side, as indicated by the arrows. In the bottom of the unit the air is deflected in a horizontal direction and passes through a water spray, after which it is turned vertically upward, passes through the eliminator plates, the cooling coils, the acoustical baffles, and across the heating element which may be placed as shown

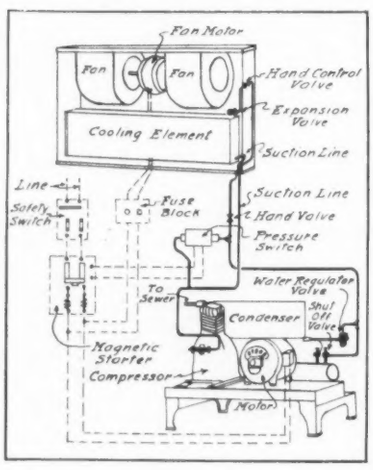


FIGURE 29

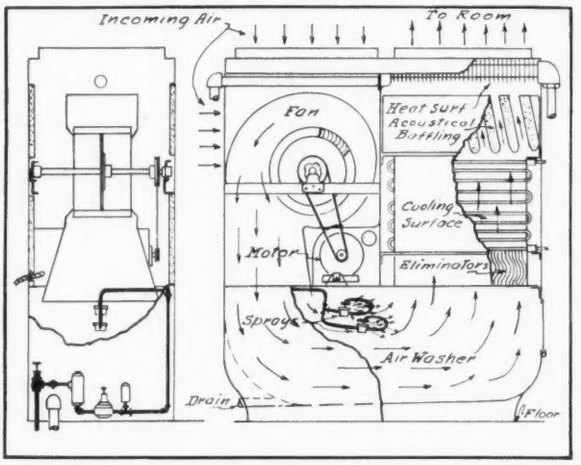


FIGURE 30

for reheating or placed over the intake for preheating, as needed for winter operation.

This unit will supply complete air conditioning when properly connected up to the heating and refrigeration systems to supply the surface contained. With steam or hot water connected to heating coil, tempered water to sprays, and refrigerated water or directly expanded refrigerant to the cooling coil, this unit gives controlled humidity, air purification and air motion in winter, plus cooling and dehumidification in summer. Air washing is continued in summer, when cooling, to remove odors otherwise accumulating in occupied areas. Water condensed from the air goes to waste with spray water. Every effort has been made to eliminate noise, as will be seen by the use of acoustical baffles on the outlet and the covering of the interior of the fan chamber with an acoustical lining.

Portable Air Conditioning Units

Portable air conditioning units possess some desirable features where a house or building is not cooled in all rooms and where the demand for cooling varies from room to room. For example, a living room or study might be cooled by day but the bedroom is the room desired to be cooled at night. Either two stationary units must be installed, at double expense and short operation periods when they will be in use, or a portable unit, which can be shifted as desired, can be used. To meet this need, one of the largest electrical manufacturers in the country recently has placed on the market a unit which is described as follows: the unit will cool the air and dehumidify the air to a proper degree circulating the treated air throughout the room; it is mounted on rubber-tired wheels so that it can be shifted from room to room; it is equipped with a rubber hose line 15 feet long for connecting to a water faucet and with 8 feet of electric cord which may be connected to the nearest electric outlet. The unit itself is 43″ long, 33″ high, and 13″ deep from the wall; its total weight is 500 lbs.

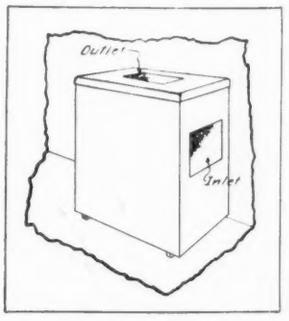


FIGURE 31

Besides these portable units, the same manufacturer has developed stationary units followed along lines similar to that already described; that is, the unit

(Continued on page 24, Advertising Section)

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SKETCHING the Gothic chill and austerity of this model is just the pastime for August heat and humidity. This particular Eldorado sketch by Ernest Watson, from his paper world, hovers between the abstract and the real. It is not entirely a cathedral, yet it suggests one.

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For none of the tones are rubbed or stumped. A kneaded eraser has been used to pick off unnecessary blacknesses, but otherwise the drawing is pure pencil work — accurate, but not photographic.

Cut out some of your own models. Throw a 200-watt light on them for good shadows. Then get Eldorado — degrees 3B, 2B, B, F, H, 2H, and 3H — and set to work. You'll find your technique improving at a fast rate. Joseph Dixon Crucible Company, Dept. 167-J, Jersey City, New Jersey.

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THE MART

J. G. Dennis, 746-A Union Street, Brooklyn, N. Y., has complete volume for 1926 of *American Architect*, advertising removed. Will exchange for architectural books, periodicals, etc.

Vincent J. Hoier, 4343 Hirsch St., Chicago, Ill., has the following copies of PENCIL POINTS for sale, at 25c each: March through September, and January, 1926; February, April, June, July, and September, 1927; March through July, and September through December, 1928; February through August, 1929; March, 1930. Also some issues of *American Architect* and *Architectural Record*.

William F. Maier, 4200 Botanical Ave., St. Louis, Mo., has the following copies of PENCIL POINTS for sale: May through December, 1923; 1924, 1925, 1926, complete; January through April, 1927; October, November, and December, 1928; 1929, complete; January through September, except August, 1930. All in good condition.

Architect's desk, complete, good condition, 6′ by 3′, cost $90.00, will sell for $13.00. Dixie League, 767 Lexington Avenue, New York, N. Y.

Architect wishes to obtain desk space or small drafting room in architect's or engineer's office, offering services in payment of rent. Send communications to PENCIL POINTS, in care of The Mart.

Harry B. Shanes, 6224 No. 13th Street, Philadelphia, Pa., would like to purchase a copy of Racinet's *Costume Historique*.

J. M. O'Neil, 322 Commonwealth Ave., Springfield, Mass., would like to purchase a complete set of textbooks on heating and ventilating, late I. C. S. or American School copies preferred. State price, etc.

Keith Schwinley, 1711 "H" Street, N.W., Washington, D. C., would like to obtain Vol. 2, Nos. 4 and 6, and Vol. 3, No. 4 of the *White Pine Series*.

Fred J. Woodward, 728 Seventeenth St., N.W., Washington, D. C., has the complete issues of 1924 PENCIL POINTS for sale at 35c per copy. Requests for odd numbers not accepted.

Harry A. Veale, 2228 Walnut Avenue, Venice, Calif., has the following copies of PENCIL POINTS for sale: 1922, complete, with the exception of January, extra copies of September and October; 1923, complete; 1924, complete; 1925, complete; 1926, complete, with the exception of July, September, and November; January, 1927; January, 1929. All are in good condition, covers slightly soiled.

PERSONALS

ANTHONY D'ELIA, JR., N. R. MASTRANGELO, AND LOUIS PANGARO, ARCHITECTS, have dissolved partnership by mutual consent. N. R. Mastrangelo will continue the practice of architecture at 750 Avenue A, Bayonne, N. J.

GEO. E. TRENT, ARCHITECT, has opened an office at Union National Bank Bldg., New Brighton, Pa., for the general practice of architecture.

T. R. GRIEST, ARCHITECT, has opened an office for the practice of architecture at 410 Columbian Bldg., Topeka, Kansas.

SAMUEL K. POPKINS, ARCHITECT, has opened an office for the general practice of architecture at 350 Leader Bldg., Cleveland, Ohio.

MANUFACTURERS' DATA WANTED

REQUESTS FOR manufacturers' literature have been received from the following:

T. R. GRIEST, ARCHITECT, 410 Columbian Bldg., Topeka, Kansas.

GEO. E. TRENT, ARCHITECT, Union National Bank Bldg., New Brighton, Pa.

FRED W. LANGHENRICH, ARCHITECT, 513 Construction Bldg., Dallas, Texas.

JOHN VAN HOFF, ARCHITECT, Box No. 225, Midland Park, N. J.

RALPH LITTLE, ARCHITECT, Box 341, Camden, South Carolina.

VINCENT J. RIGGI, ARCHITECT, 111 S. Apple Street, Dunmore, Pa. (for A.I.A. file).

SAMUEL K. POPKINS, ARCHITECT, 350 Leader Bldg., Cleveland, Ohio.

LEO A. JOSLYN, draftsman and builder, 537 Foothill Blvd., Oakland, California (for A.I.A. file—particularly interested in catalogs on steel frame and allied methods of construction for small residences).

KENNETH GRETHEL, architectural student, 403 Waller St., San Francisco, Calif.

HYMAN RUBIN, architectural student, 159 East 96th Street, New York, N. Y.

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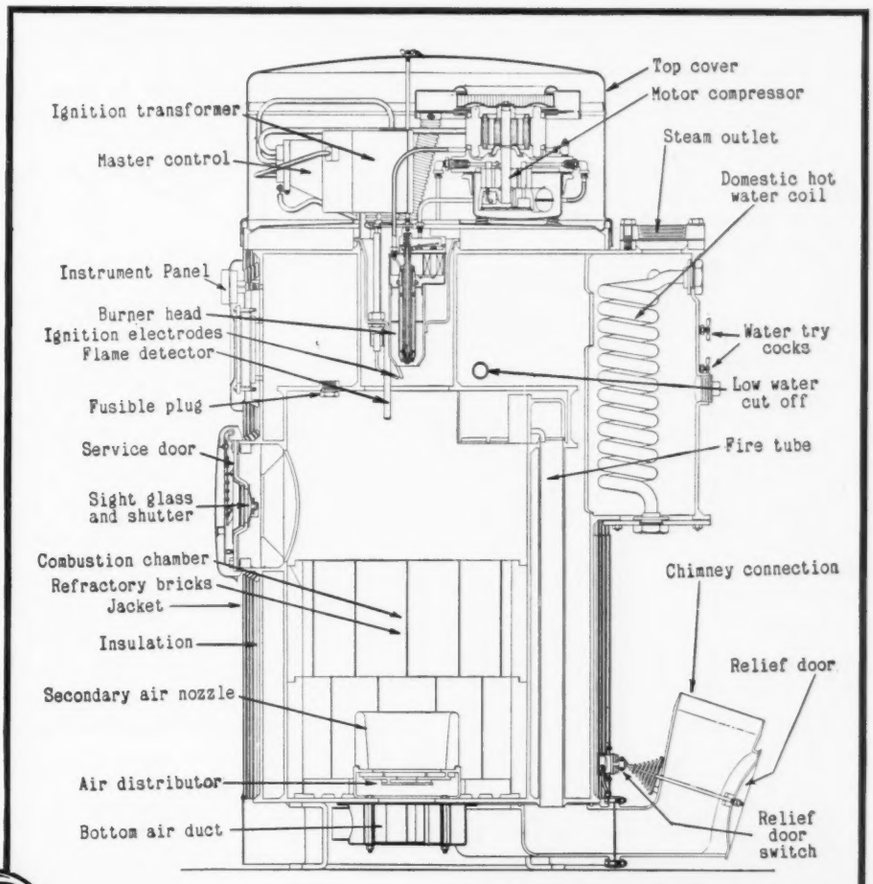

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Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

Atlantic Exterior Cleaning Service.—New descriptive folder illustrating some of the prominent buildings cleaned by hand washing, sandblasting or steam cleaning methods. 6 pp. 8½ x 11. Atlantic Terra Cotta Co., Service Dept., 19 W. 44th St., New York, N. Y.

The Thermochron.—New catalog for architects and heating engineers illustrating and describing in detail the construction, operation and advantages of a newly-developed electric clock temperature control, which combines time and temperature functions to make possible the anticipation of temperature changes without the aid of artificially applied heat at the thermostat. Specifications. 12 pp. 8½ x 11. Minneapolis-Honeywell Regulator Co., 2753 Fourth Ave., South, Minneapolis, Minn.

Armstrong's Accotile Floors.—Attractive folder illustrated in full colors presenting descriptive, installation and maintenance data on the subject of Accotile flooring of the asphalt type, suitable for use on basement floors and other areas at or below grade level. Suggested designs. 6 pp. 8½ x 11. Armstrong Cork Co., Floor Division, Lancaster, Pa.

Published by the same firm, "Armstrong's Rubber Tile." New publication devoted to the subject of Armstrong's rubber flooring tile adaptable for use in residences, offices, clubs, etc. Included are color chart and series of designs reproduced in four colors. Installation and maintenance directions. 8 pp. 8½ x 11.

Corinco Cork Products.—New catalog, dealing with the subject of Corinco corkboard, profusely illustrates and describes the modern methods necessary for proper insulation of cold storage warehouses, breweries, packing houses, ice plants, dairies, ice cream factories, etc., with sheet corkboard, cold pipe covering and fitting covers. 40 pp. Cork Insulation Co., Inc., 154 Nassau St., New York, N. Y.

Let's Bring the Kitchen Up-to-Date.—Attractive brochure showing numerous models and sizes of Streamline and Straitline Monel metal cabinet tops and kitchen sinks. Descriptive and dimension data. 28 pp. The International Nickel Co., Inc., 67 Wall St., New York, N. Y.

Modern Home Heating and Air Conditioning.—Attractively illustrated brochure explaining in detail the operation and advantages of two combined heating and air conditioning systems adapted to residences, churches, theatres, stores, etc., one called the Tempered-Aire direct unit and the other the indirect method or split system. 20 pp. 8½ x 11. Gar Wood Boiler Division, Wood Hydraulic Hoist & Body Co., Detroit, Mich.

Alundum Rubber Bonded Safety Treads.—Folder with blueprint installation details and description of an improved safety tread of the replacement type suitable for a wide variety of applications. Norton Company, Worcester, Mass.

The Facts About Welded Piping for Buildings.—New publication prepared especially for architects and heating engineers discusses the principal advantages and economies to be obtained from welded piping installations in large commercial, institutional and public edifices as well as for residences and other small and medium-sized buildings. Typical installations. 12 pp. 8½ x 11. Air Reduction Sales Co., 60 E. 42nd St., New York, N. Y.

The New Electrol Heating Unit.—A.I.A. File No. 30-c-14. Folder with descriptive and specification data covering the Electrol automatic oil furnace, a complete, self-contained heating unit, combining an electric oil-burning mechanism, a boiler and a hot water heater, for steam, vapor steam and hot water heating. Sizes and capacities. 8 pp. 8½ x 11. Electrol Incorporated, 227 E. 45th St., New York, N. Y.

The New Weil-McLain Raydiant Radiators.—A.I.A. File No. 30-c-4. Catalog H-41. Useful reference manual covering a new line of all-cast-iron radiators of the concealed, cabinet and wall types. Descriptive and engineering data, construction and installation details, tables of sizes, rates, heights, etc. 12 pp. 8½ x 11. Weil-McLain Company, 641 W. Lake St., Chicago, Ill.

The Brownie Vapor-Vacuum Heating System.—A.I.A. File No. 30-c-24. New catalog prepared especially for architects and heating engineers announcing and giving a detailed description of the functions and performance of a new vapor-vacuum system which omits boiler-room traps and vents, particularly adaptable to small heating installations, such as residences, stores, garages, shops and small factories. Specifications, tabular matter. 14 pp. 8½ x 11. Brownie Co., Inc., Belleville Turnpike, North Arlington, N. J.

A-B Gas Ranges.—General catalog No. 33 lists and illustrates a complete line of gas ranges, kitchen-heaters, cookers, unified ranges and light-duty restaurant ranges. Dimensions, prices, etc. 32 pp. 8½ x 11. A-B Stove Co., Battle Creek, Mich.

Modernization Tried.—Collection of descriptive and authenticated operating reports, dealing with the modernization of apartment buildings, show results achieved through the installation of new heating equipment in these buildings. 34 pp. 8½ x 11. American Radiator Co., 40 West 40th St., New York, N. Y.

Durabilt Steel Vestment Cases.—Illustrated data sheet describing a new line of steel cases for storing vestments and other special articles. 8½ x 11. Durabilt Steel Locker Co., 479 Arnold Ave., Aurora, Ill.

Kinnear Draw Bridges.—New descriptive folder covering a new type of draw bridge, either hand or motor operated, for providing cross-over walkways and driveways at industrial plants. 8½ x 11. The Kinnear Manufacturing Co., Columbus, Ohio.

Why Solka Base Asphalt Roofings?—A non-technical description in questionnaire form of Solka base roofings and their advantages. 8 pp. 8½ x 11. The Brown Co., Portland, Maine.

Evans Fuel Oil Furnace and Air Conditioner.—Descriptive folder covering the Evans forced condition warm air system, consisting of an all-steel oil-burning furnace and air conditioner. 4 pp. 8½ x 11. The Geo. Evans Corp., Moline, Ill.

Mesker Casement Windows.—A.I.A. File No. 16-e-1. Useful new reference book for the architect and drafting room covering a complete range of casement windows in both the projected and sidehung types, including cottage casements, intermediate casements, heavy casements, basement windows. French doors and subframes. Included are specifications, construction and installation details, sizes, hardware, etc. 40 pp. 8½ x 11. Mesker Bros. Iron Co., 424 S. Seventh St., St. Louis, Mo.

Erskine Portable, Electric Radiator.—Folder with description, sizes and prices covering a line of portable electric radiators. Erskine Copper Radiator Corporation, 1 E. 42nd St., New York, N. Y.

Published by the same firm, "Erskine All-Copper Indirect Water Heater." Illustrated bulletin dealing with a type of indirect water heater for attachment to steam or water boilers.

Laclede Steel Joists.—A.I.A. File No. 13-g. Looseleaf catalog containing specifications, load design tables and numerous detail sheets covering Laclede steel joists and accessories. 38 pp. 8½ x 11. Laclede Steel Co., St. Louis, Mo.

Fulton Sylphon Water Mixer No. 903.—Bulletin No. 807 presents a detailed description of a new type of water mixer suitable for controlling temperature of water supplied to individual showers and numerous other applications where water temperature control is desirable. Piping diagrams. 16 pp. 8½ x 11. Fulton Sylphon Co., Knoxville, Tenn.

Handbook of Electric Weld Tubing.—New handbook giving a brief description of the method employed in the manufacture of electric weld tubing, together with comprehensive and authentic engineering and standard practice information on the subject. Indexed. 68 pp. Steel and Tubes, Inc., 223 East 131st St., Cleveland, Ohio.

Penn Air-Cooling for Homes.—Illustrated folder briefly describing the principal features of an air-cooling system for installation in homes both old and new. 4 pp. 8½ x 11. Penn Engineering Company, 1119 N. Howard St., Philadelphia, Pa.

Russ Bars.—New catalog covering a complete line of beer dispensing equipment, including service bars, novelty boxes, coil boxes, etc., for hotels, restaurants, clubs, etc. Specifications. 16 pp. Russ Soda Fountain Co., Cleveland, Ohio.

Duronze Alloys.—New publication describing the physical properties and applications of three high strength silicon bronzes produced under the trade name of Duronze alloys. 24 pp. Bridgeport Brass Co., Bridgeport, Conn.

The New Kewanee Round Steel Boiler.—A.I.A. File No. 30-c-1. New bulletin CO-92-a explaining the constructional features of a coal-burning round steel boiler for heating homes and other small buildings. 8 pp. 8½ x 11. Kewanee Boiler Corporation, Kewanee, Ill.

Minimizing Maintenance and Repairs with the Usicast Roof.—Folder with construction details and complete information, including sizes, weights and construction data pertaining to the Usicast roof. 4 pp. 8½ x 11. United States Pipe & Foundry Co., Burlington, N. J.

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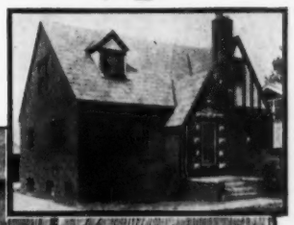

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MODERN AIR CONDITIONING, 3

(Continued from page 380)

gets its refrigerant from a remote compressor, the piping between compressor and unit consisting of two small refrigerant lines, with a drain line from the unit and an electric connection to operate the fan. On the compressor, cooling water supply and waste water lines are necessary, together with an electric service to operate the compressor motor. The compressor has a 1-ton capacity and is driven by a 2-horsepower motor while, if two units are included in the installation, a 2-ton compressor is substituted and both units supplied by the same compressor.

A third development by the same manufacturer is a combined summer and winter unit, taking air from outside which will cool and dehumidify the air in summer, and warm and humidify the air in the winter. In addition, it has an air filter and a noise silencer which will prevent street noises, which ordinarily enter from the outside, being audible in the room. The compressor is included in the cabinet and has 2/3-ton cooling capacity while the heating effect is equal to 40 square feet of heating surface at the usual 240 Btu rating. All that is necessary to transfer from heating to cooling is to throw a switch and adjust a water valve and this can be done at any time when the inside conditions warrant. The heating surface is operated by steam secured from the building heating plant and takes the place of the usual room radiator.

The Ice Cooled Air Conditioning Unit

Where the initial cost of air conditioning units with mechanical refrigeration is such as to prove prohibitive, the ice-cooled unit may be the means of providing cooling at a considerably smaller investment. These units are portable and can be provided with piped drains for the carrying off of the condensation caused by the dehumidification or may be equipped with drip pans to be emptied manually from time to time. The only service to the unit is the electric current necessary to operate the motor. In construction it resembles the ornamental mechanical cooling unit—see Figure 31—but the interior is arranged with an ice tank in place of the cooling element. Fans blow the air through the unit as in mechanical types and the air is cooled and dehumidified by flowing over the outside surface of the ice tank. The ice tank is constructed of the proper size and capacity to contain a 300-pound cake of ice and this will last from 4 to 8 hours depending on the air conditions in the room.

The equivalent refrigeration effect produced by these units is in the neighborhood of ½ ton, while the ordinary room mechanical unit ranges around one ton or slightly over. Thus, it will be seen that it will require two ice units to give an equal cooling effect comparable with one mechanical unit. The greatest objection to this type of unit is the ice servicing and draining and the greatest asset is the moderate first cost, the elimination of all service and refrigeration piping, together with their portability. They can—in a hospital for example—be shifted from one room to another, being provided with casters for this purpose. The weight, however, is considerable—consisting of 300 lbs. of ice, plus the weight of the unit, plus all the water of condensation which may collect from dehumidifying the air.

Editor's Note:—*Our attention has been called to the fact that the approximate dimensions for dry air filter units of glass wool as described in the last paragraph of the first column on page 331 of the July issue of* PENCIL POINTS *happened to coincide with those of the product of one manufacturer. The author gave approximate dimensions in order to avoid describing too exactly any individual manufacturer's product. Since the dimensions inadvertently fitted one product, however, it is only fair to say that the largest national distributor of these glass wool dry air filters supplies them in units of 20" x 20" x 2", 16" x 20" x 2", and 16" x 25" x 2".*

A Free Employment Service for Readers of Pencil Points

Replies to box numbers should be addressed care of PENCIL POINTS, 330 West 42nd Street, New York, N. Y.

Position Wanted: Man, 27, single, desires position as a salesman, and draftsman with retail lumber company in or near Tulsa, Oklahoma. Completed I.C.S. course, one year in architect's office, four years carpenter, three years salesman and draftsman with retail lumber company, where now employed. Understand lumber grades and construction. Can carry job through from sketching to estimating. Can furnish best of references. Box No. 800, care of PENCIL POINTS.

Position Wanted: Architectural designer, 20 years' diversified experience in reputable offices of the east. Graduate of prominent school. Successful in competitions. Appreciation of the modern style and well versed in the traditional. Rendering in pencil and color. Thorough knowledge of construction and details. Will accept any reasonable salary and prepared to locate anywhere. Box No. 801, care of PENCIL POINTS.

Wanted: Salesman throughout the United States to sell a street lamp accessory to Municipalities. Liberal commission and an excellent opportunity for a man with car. Pal Swing Co., Minot, N. D.

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Position Wanted: Young man, 24 years of age. College education in architecture. Two years' experience in construction, desires position in vicinity of Philadelphia. Henry Albright, 721 Garfield Avenue, Palmayria, N. J.

Position Wanted: Architect, 54 years of age, 32 years' experience, 25 years conducting office, desires position representing manufacturer of building materials or other position where knowledge of building materials may be required. Box No. 807, care of PENCIL POINTS.

Position Wanted: Ten years' experience as draftsman on all class of buildings. Recently awarded certificate of registration in Illinois. Age 29. Location immaterial. Box No. 803, care of PENCIL POINTS.

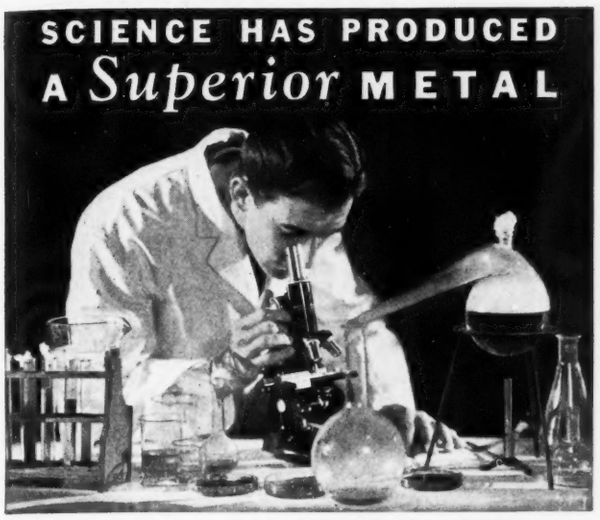
Position Wanted: Architectural engineer, superintendent or draftsman. Graduate. 17 years' wide experience, design, specifications, contracts, supervision, alterations, all types of buildings covering entire United States. Experience received with leading New York architects, engineers, contractors and with industrial and national chain store organizations. Excellent references. Married. Location immaterial. Salary reasonable. Box No. 804, care of PENCIL POINTS.

Position Wanted: Perspectives in pencil and color, working drawings, details, specification, typing, appraising. Seeks connection with architect, realtor, or builder. Address Registered Architect, 3831 Albermarle Avenue, Drexel Hill, Pa.

Position Wanted: Designer-draftsman, ten years' general experience, apartments, residences, commercial, etc. Perspective rendering in color and monotone. Box No. 805, care of PENCIL POINTS.

Position Wanted: Draftsman—quantity taker, estimator, covering cast stone, ornamental plaster and terrazzo mosaic. Perspective rendering with pen and ink, and thorough knowledge of shop practice. Twenty-six years of age, single. Ambitious, dependable. Eight years' practical experience. Excellent references. Will locate anywhere. Box No. 806, care of PENCIL POINTS.

Position Wanted: Architectural student desires position in architect's office. Experience main object. References. Hyman Rubin, 159 E. 96th Street, New York City.



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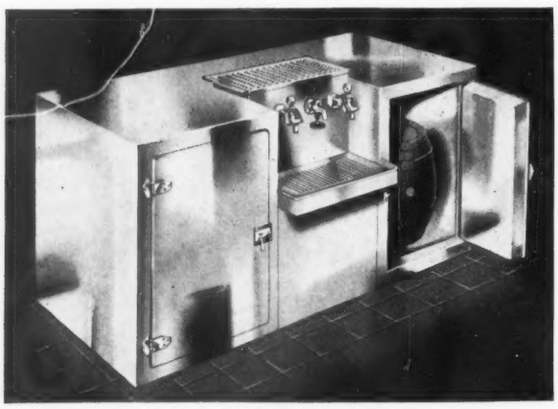
Announcements of New Products, Changes in Personnel, etc.

MODERN BEER SERVICE BAR

To meet the need for a small, compact beer dispensing and service bar the Liquid Carbonic Corporation, 3100 S. Kedzie Avenue, Chicago, has just announced two new units for restaurants, clubs and hotels. Sanitary, self-contained, it can be placed in any convenient spot; or it can be incorporated in a bar layout.



It is a flexible unit and can be furnished for ice or with direct expansion coils for mechanical refrigeration. The Zahm counter pressure system of bear dispensing and cooling is also incorporated in it or furnished with block tin coils for both water and beer, as requested. It has a stainless steel facing front and top; drip and drainer of the same metal. The entire unit may be faced in stainless steel if desired.

The No. 265 Red Diamond beer service bar accommodates ½ barrel. It has a beer faucet and one faucet for water. The new Model 266 will accommodate two half barrels, one on either side of the center coil box with two faucets for beer and one for water.

DAHLSTROM TO MARKET NEW "WHITE" KITCHEN CABINET AND DOOR BEDS

The Dahlstrom Metallic Door Company of 475 Fifth Ave., New York City, through its White Bed and Cabinet Division, will manufacture and distribute a new line of kitchen cabinet units as well as a complete line of door beds, dressing room cabinets, ranges, refrigerators, etc., through its many offices over the United States.

Cooperating with the Dahlstrom Metallic Door Company are the American Gas Products Company, the Standard Sanitary Mfg. Company, Servel, Inc., and the Carbide & Carbon Chemicals Corporation.

The new "White" kitchen campact comprises gas range, gas refrigerator, sink and storage cabinets, arranged in convenient order, and provides for an additional cabinet 30 inches wide housing an A.G.P. hot water heater and ideal house heater. This equipment has sufficient capacity to furnish the heat and hot water for a home of from 3 to 7 rooms. This makes it possible to eliminate excavation for this type of home. A wide variety of arrangements is possible due to the multiple units of which the "White" cabinet compact is made up. It covers 132 in. in length, plus 30 in. if the gas heating equipment is added. It is constructed of steel, finished so that it will not rust, chip or stain.

CONSOLIDATION OF HART & COOLEY AND TUTTLE & BAILEY

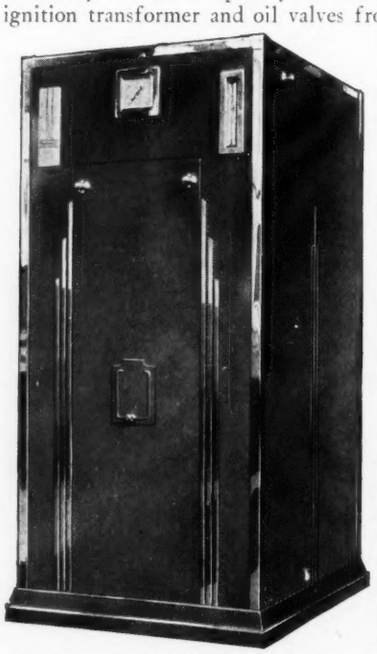
In order to more effectively serve the industry, Tuttle & Bailey, of Brooklyn, N. Y., manufacturers of cast metal registers and ornamental grilles, and Hart & Cooley, of New Britain, Conn., producers of wrought steel registers and grilles, have consolidated their manufacturing operations and sales forces.

The contract business, including the manufacture and sale of ornamental grilles and ventilating registers, both cast and perforated, will be handled by Tuttle & Bailey, Inc., with executive and engineering offices in New Britain. For the convenience of the trade, main sales offices will be continued at 70 Berry Street, Brooklyn, N. Y., and at New Britain, Conn. Branch offices will be maintained in Boston, Philadelphia, Chicago and Kansas City in addition to local representatives in other principal cities.

The stock register business, comprising the manufacture of warm air registers and furnace accessories, will be located in the plants of the Hart & Cooley Mfg. Co., at New Britain; Holland, Mich.; and Tuttle & Bailey Mfg. Co., Ltd., Fort Erie North, Ont.

TORIDHEET ANNOUNCES NEW OIL-BURNER BOILER

The Cleveland Steel Products Corp., Toridheet Division, Cleveland, Ohio, has recently placed on the market a new oil-burner boiler. A non-crumbling heat refractory hearth completely insulates the burner motor, ignition transformer and oil valves from heat of the combustion chamber.



The unit is a combined oil burner and boiler for heating new or old homes and is equipped with low limit controls, low water cut-out and feeder and a built-in large capacity water heating coil for domestic hot water. The boiler is constructed in sections to simplify basement installations. The indirect heating surfaces are finned to give unusually large area. A Toridheet Model C Ropeller operated oil burner with dual electric pilots is built into the base section at the factory. The capacity of the boiler is 750 sq. ft. of connected load.

The cabinet is of sheet steel, air-cell insulated. The body is finished in a light plum baked enamel with a dark plum base. Chromium trimmings add a modern touch to the unit.

THE THERMOCHRON

An important development in the art of temperature control is announced by the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., in the form of a new instrument called the Thermochron. It combines time and temperature functions to make possible the anticipation of temperature changes without the aid of artificially applied heat at the thermostat. It takes the place of the conventional room thermostat though in external appearance it is like the standard electric clock thermostat which this company manufactures.

In its operation it is radically different from a thermostat because it combines the action of time and temperature. A fraction of a degree drop in temperature causes the Thermochron to turn on the heat for a period of from one or two minutes to fifteen or twenty minutes, or continuously, depending upon the rate of heat loss from the building. In contrast to this action a thermostat waits for a one or two degree temperature drop, then turns the heat on and keeps it on until a temperature rise is registered at the thermostat, with the result that there is constant overheating and underheating to a large or small degree, depending upon the accuracy of the thermostat and the rate of heat circulation.

Because of its new principle of action, the Thermochron, it is stated, constantly provides heat directly in proportion to the rate and amount of heat loss and so maintains temperatures within a fraction of a degree of the setting of the pointer and eliminates objectionable overheating, underheating and air stratification.

A. W. FABER, INC., ELECTS OFFICERS

At a recent meeting of the Board of Directors of A. W. Faber, Inc., Newark, N. J., the following officers were elected: Frank C. Mindnich, president; Nathan Bilder, vice president; Robert Sauter, secretary and treasurer. Mr. Sauter, who has been associated with the firm for many years also retains the office of general manager. H. U. Bittman continues in the capacity of sales and advertising manager. Mr. Mindnich, who succeeds the late Robert J. Metzler, is president of the Federal Trust Co., of Newark, and a trustee for the estate which has the controlling interests in A. W. Faber, Inc.

VEOS ACID RESISTING ENAMELED STEEL SINKS

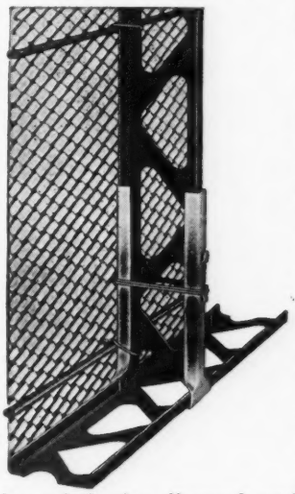
Kitchen sinks of light weight, yet possessing, it is said, many advantages of strength, rigidity, appearance and economy are now being manufactured by The Youngstown Pressed Steel Company of Warren, Ohio. These sinks are pressed from a single piece of heavy gauge, special analysis steel in modern and attractive designs.

This latest development, known as the "President Line" of Veos sinks, contains six distinct models which may be had in twenty different sizes. All models are furnished in a special grade of acid-resisting enamel. Every fixture is enameled on both sides, so there is no possibility of rusting or other unsanitary conditions arising on the under part of the sink.

The new line of sinks is said to successfully illustrate the principle that strength is not a matter of weight. No legs are used, yet the fixtures are designed to possess unusual strength and rigidity. The saving in weight has an important bearing upon handling, transportation and installation costs, and makes these sinks especially adaptable to remodeling work in old houses where heavier fixtures would require additional strengthening of the wall structure on which the sink is to be hung.

BAR-Z PARTITIONS

The Consolidated Expanded Metal Companies, Wheeling, W. Va., have recently developed an entirely new and simplified method of building lightweight fire-safe partitions to meet the modern demand for steel frame construction at a low cost. The Bar-Z partition, as this new steel stud partition construction is called, is made up of four simple elements; Bar-Z studs, track for flooring and ceiling, shoes for attaching the studs to the track and reinforcing metal lath.



The studs are full 16-gauge and are well formed with substantial flanges and are perfectly straight. They are punched out to form a truss-like design to retain practically all of the strength of the original channel. The studs provide openings for tieing the metal lath on both faces of the partition. The unusual rigidity of the studs makes it practical to place them 24 in. on centers. An important feature of the partition is a reinforcing diamond mesh lath, known as Bar-X lath, which has solid steel ribs welded to both sides of the lath 7 in. center to center. By means of these, a rigid plastering base is obtained which will easily span the 24 in. from stud to stud without the necessity for a thick coat of plaster.

The lath is tied to the studs at the point where the reinforcing ribs of the lath intersect the studs. Extension shoes provide for irregularities on the floor and ceiling, and make cutting and fitting quite unnecessary. Bar-Z partitions are furnished in various widths ranging from two to six inches.

FRIGIDAIRE ANNOUNCES HEAVY DUTY AIR CONDITIONING EQUIPMENT

Entrance of the Frigidaire Corp., subsidiary of General Motors, into the field of heavy duty air conditioning equipment is announced by E. G. Biechler, president and general manager. The company is introducing nationally large capacity equipment designed to handle the air conditioning loads required for theatres, office buildings, apartment biuldings, retail commercial establishments, large residences and individual industrial applications.

COPPER-ARMORED SISALKRAFT

The Sisalkraft Co., Chicago, Ill., has announced a new development in its line of building papers, to be known as Copper-Armored Sisalkraft. It is a combination of a one-ounce (per sq. ft.) sheet of electro-deposit copper with Sisalkraft. The metal is pure copper, uniform in thickness, and without holes.

When backed by Sisalkraft, with its tough reenforcing of crossed sisal fibres, this material is said to offer many advantages for building construction. For the present, Copper-Armored Sisalkraft will be marketed only in rolls 10 in. wide for flashing door and window openings.

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